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Leading Article

Economic Planning and the Building Industry

THE IDEA of economic planning is anathema to many, especially when accompanied by physical controls, as it was under the Labour Government; but the periodic recurrence of economic crises has shown the necessity for some machinery of planning more effective than has apparently been provided by the existing Economic Planning Board. No industry can be expected to function efficiently under the constant menace of 'stop—go' control, building least of all, with its long cycle of processes between the stages of planning and completion. Generally the need for restraint passes long before the measures taken have run their course, leaving the industry with the exasperating task of recovering its momentum, which need not, perhaps, have been lost.

On a philosophical view, therefore, some encouragement may be taken from the fact that, following his 'little Budget' statement of July 25, in which he stressed the need to diminish the increasing demand for new building, the Chancellor of the Exchequer, on September 28, published the text of his letter to the TUC, the FBI, the British Employers' Confederation, and other representative bodies, suggesting the establishment of 'new and more effective machinery for co-ordination of plans and forecasts for the main sectors of our economy.' There was, he stated, a need 'to study centrally the plans and prospects of the main industries, to correlate them with each other and with the Government's plans for the public sector, and to see how in aggregate they contribute to and fit in with the prospects for the economy as a whole, including the vital external balance of payments.'

Little more is known at the moment than the intention of the Government to create a National Economic Development Council, of which the Chancellor would be the chairman and on which one or two other Ministers—such as the President of the Board of Trade and the Minister of Labour—would serve as members. The other members of the Council would be drawn from the Trade Unions and from the management side of private and nationalised industry, 'with perhaps some additional members'—a total membership of about twenty. We trust that these additional members will include representatives of the associated professions, especially the architects. The New Commissions' Survey of the RIBA, in particular, could serve as a valuable economic indicator. The figures for the April-June quarter of 1961, for example, show a falling trend in demand for building work before the Chancellor's earlier statement, and this, combined with the new official policies—the restrictions on credit, the new taxes and the slowdown in public investment—might well spread a restrictive influence over a longer period than is necessary.

If the proposed new planning organisation does its work efficiently it might well prove of considerable benefit to the industry. A long period of steady, assured develop-

ment, free from that 'off-and-on tap-turning' which has become its greatest bugbear, is essential to the industry if it is to estimate, recruit and train its needed personnel, perfect its own organisation and efficiency, and assess its probable demand for materials, especially in view of our probable entry into the Common Market in 1970. How the industry will be affected by this is not at the moment certain, but as building costs in this country compare favourably with those of the Continent there would appear to be little need to fear foreign competition in our own market; while in overseas building, especially in the underdeveloped countries, we have shown our ability to compete successfully with foreign firms. There might, perhaps, be stiffer European competition in the supply of building materials to our own market, but that would not be a bad thing since it would tend to reduce or stabilise prices and so help firm-price tendering.

In brief, apart from freedom from unnecessary control, the greatest need of the industry is for an intelligent forecast of the likely demand on its services. Given this, it could settle down to streamlining itself for the era of continued expansion that undoubtedly lies ahead.

Notes of the Week

Post-graduate Research ; New Parliamentary Session ; Calligraphy at the Crafts Centre ; Joint Training Ahead?

THE TWO-DAY CONFERENCE on Post-graduate Research and Refresher Courses for Architects which ended at the RIBA on Friday last was an undoubted success. A measure of its importance is that nearly 50 professors and heads of architectural schools found it worth while to spend two days in discussion of the subjects, and if no one came away from Portland-place carrying in his head a neatly documented brief of what is needed to get post-graduate training on its feet up and down the United Kingdom and Eire, at least the Board of Architectural Education, which organised the meeting for the RIBA, has plenty of ideas on what to do.

The findings of the conference are to be available within the next fortnight or so, and we shall not anticipate them other than to say that all four sessions were lively and productive, due largely to the method adopted (discussion by a selected panel of speakers for approximately half of the time available, followed by contributions from the floor) and to the quite first-rate chairmanship of Professor Llewelyn Davies, whose persuasive, firm and witty conduct of both panel and outside speakers extracted the maximum of information and ideas with the minimum of pain. One must hope that the presence at the conference of town-planners, engineers, quantity surveyors and even a builder (Mr. Woodbine Parish) means that the problems of organising research into architecture will not be tackled in an architectural vacuum; to do so would be merely to perpetuate the situation which has necessitated the call for such research.

New Parliamentary Session

THE QUEEN'S SPEECH next Tuesday morning will herald the new session of Parliament by giving an outline of the Government's programme. The old session ended last Tuesday when in the House of Lords the Royal Assent was signified to the Housing Bill.

While Parliament was occupied last week on foreign affairs, developments in economic planning went a stage further when the Chancellor of the Exchequer had a meeting with employers' representations. He was due to have a meeting with representatives of the TUC last Wednesday (October 25). The employers after what was termed 'a useful exchange of views,' have given general support to Mr. Selwyn Lloyd's proposal to set up a National Economic Development Council. Much will depend on the outcome of the meeting with the TUC and it is also understood the Chancellor will at some time meet representatives of the nationalised industries.

Calligraphy at the Crafts Centre

AT THE CRAFTS CENTRE until November 3 is an impressive exhibition by the Society of Scribes and Illuminators, whose last was in 1956 and whose 40th anniversary the current one marks, writes BASIL MARRIOTT. Congratulations both on this and on the undeviating standards the society maintains in a field which covers heraldry, genealogical tables, addresses and scrolls and maps as well as calligraphy and all that goes into 'the making of many books.' Because (and not in spite) of the modern interest in typography on the one hand—classic example of controlled standardisation and even mechanisation—and in manuscript (the Society for Italic Handwriting was an offshoot of the present exhibitors in 1952) those standards remain paramount—as source rather than copybook, however, since there is an essential difference.

The general effect is therefore traditional, in the best sense. Any perceptible change is towards more informality—though of a strictly disciplined kind. Some of the best could have been written (rather than 'lettered') off the cuff; but try, as I did for a boyhood hobby, to write it off your own to appreciate the pains and skill involved! The poverty of much draughtsman's lettering today proves how worthwhile those pains are—not to mention the advent of those councils of despair, stencils and stick-ons.

I cannot mention, individually, the many delightful and elegant examplars of the calligrapher's craft, but among the few disappointments is the certificate to the winner of the CoID's Duke of Edinburgh Prize for Elegant Design for 1959, which seems to me a compromise between near-typography and near-handwriting. The fault, however, cannot lie with the calligrapher, Sheila Waters, who elsewhere in the exhibition shows an acute and consistent sense of appropriateness—and elegance.

Joint Training Ahead?

IT IS EXCELLENT NEWS that the National Joint Consultative Committee of Architects, Quantity Surveyors and Builders has now set up a committee under Sir Noel Hall, Principal of Brasenose College, Oxford, to consider ways and means in which joint training for the professional and contracting sides of the building industry could be developed. This is a move first advocated at the conference held at the RIBA in 1956 when delegates (see 'The Builder' of February 10, 1956, p. 224) invited the NJCC to set up a representative National Advisory Committee for this very purpose. There is little advantage now in probing into the reasons why this mandate was not implemented, other than to say that valuable years have been thrown away which it must now be the objective of the new committee to recover. We wish it well.

European Techniques

On page 777 of this issue will be found the first of a monthly series of abstracts from the principal European technical magazines of interest to the architect, town-planner, engineer and technician. Much is happening on the Continent of Europe of importance to British architects, and this feature (which will appear in the fourth issue of each month) will, we hope, assist in keeping our readers in touch.

Poet's Corner

THE TEA-BREAK STORM is said to be abating.

Break, break, break
Off work for a cup of tea,
A needed and potent refreshment
All right-thinking people agree.
Ah well for the workers all
Who sup without fuss or delay,
And quickly return to the job
To set about earning their pay.
Good luck to employers and men
Who show commonsense and goodwill;
Farewell to the 'vanished hand'
And the job that's deserted and still.
Break, break, break
With the wasteful break, O tea;
No self-respecting worker wants
Both char and charity.

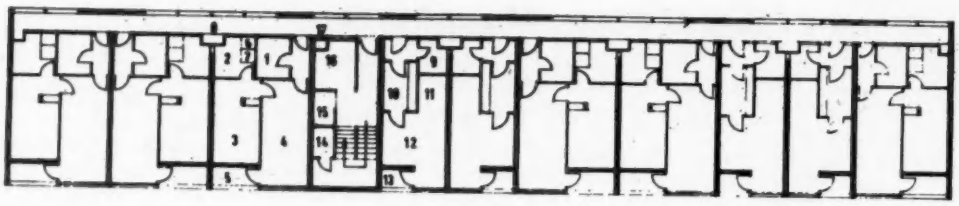
ANON.

(With apologies to Tennyson.)

Block of Small Flats, Manchester

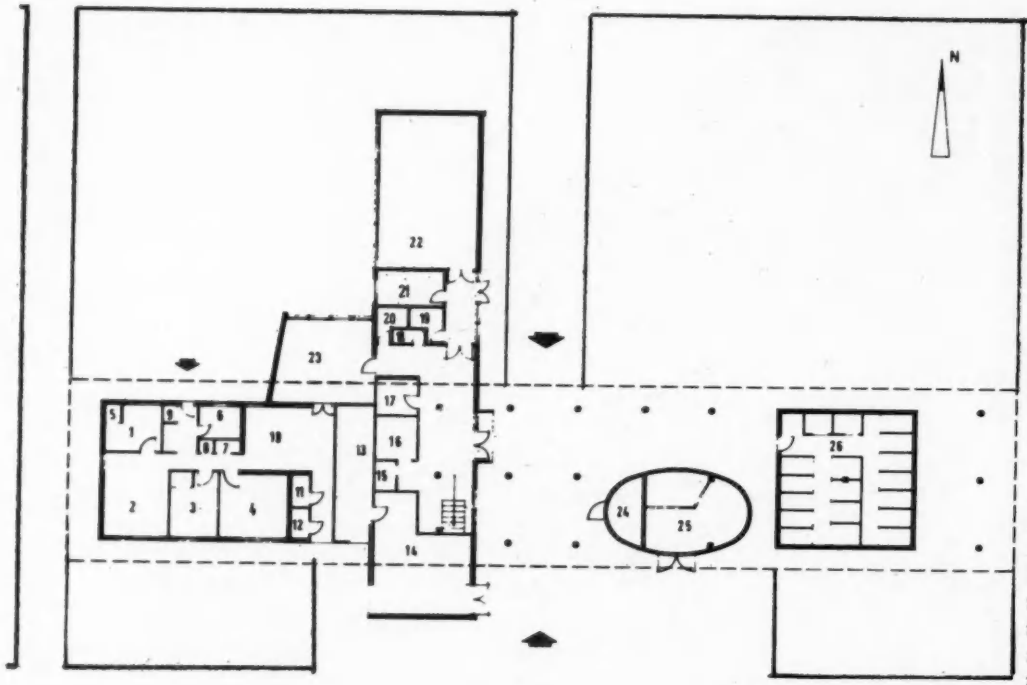
J. AUSTEN BENT, DIP TP, ARIBA, AMTPI, director of housing
J. J. COLEMAN, ARIBA, deputy director of housing
MANCHESTER CORPORATION DIRECT WORKS DEPARTMENT, builders

north elevation



TYPICAL UPPER FLOOR PLAN

1 KITCHEN.
2 BATH ROOM.
3 BED ROOM.
4 LIVING ROOM.
5 BALCONY.
6 CUPBOARD.
7 CYLINDER.
8 DUCT.
9 BATH ROOM.
10 KITCHEN.
11 BED RECESS.
12 LIVING ROOM.
13 BALCONY.
14 STORE.
15 LIFT : 2.
16 LIFT : 1.
17 REFUSE CHUTE



1 KITCHEN.
2 LIVING ROOM.
3 BED ROOM.
4 BED ROOM.
5 LADDER
6 BATHROOM.
7 STORE.
8 STORE.
9 HEATER.
10 WORKSHOP
11 STORE.
12 STORE.
13 REFUSE CHAMBER
14 BOOSTER & TANK.
15 LIFT : 2
16 LIFT : 1
17 OFFICE.
18 STORE.
19 GENTS' LAV.
20 LADIES' LAV:
21 KITCHEN.
22 MEETING HALL.
23 LAUNDRY
24 SWITCH ROOM.
25 TRANSFORMER.
26 STORES

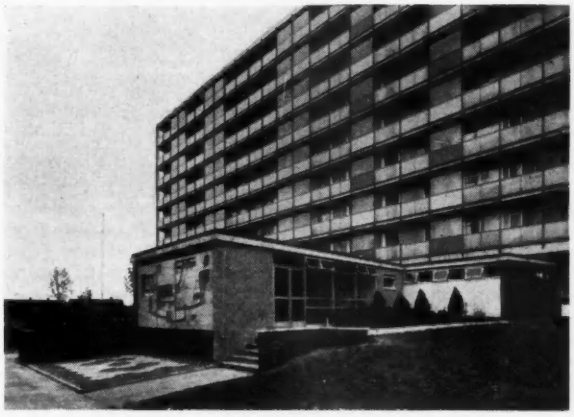
GROUND FLOOR PLAN

scale 0 10 20 30 40 FEET

SIMON COURT is the first multi-storey block of flats to be completed in Manchester, and is the beginning of a large programme of this type of development by the Corporation. The block is erected on a flat island site at Woodhouse Park, Wythenshawe, and acts as a visual terminal to an existing pedestrian shopping precinct. A large part of the ground floor area is left open so that the shops are visible from the access path passing under the block.

Eighty-one flats are provided, consisting of 32 bed-sitting room flats for single persons, total area 303 sq. ft. plus private balcony area, and 48 one-bedroom flats for elderly couples, total area 466 sq. ft. plus private balcony of 31 sq. ft. A two-bedroom flat of 734 sq. ft. is provided for the superintendant. All flats have electric underfloor heating in the kitchen, living room and hall. A 2-kw wall-mounted electric fire is provided in each living room.

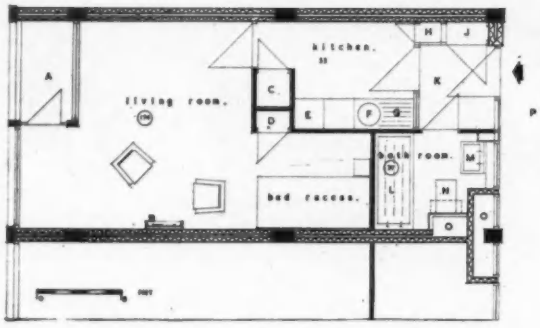
Construction is of reinforced concrete framework designed and erected by Truscon Ltd. Cladding on the north side and gable ends is cavity brickwork with Thermalite block inner leaf. The south side has expanded polystyrene infilling panels



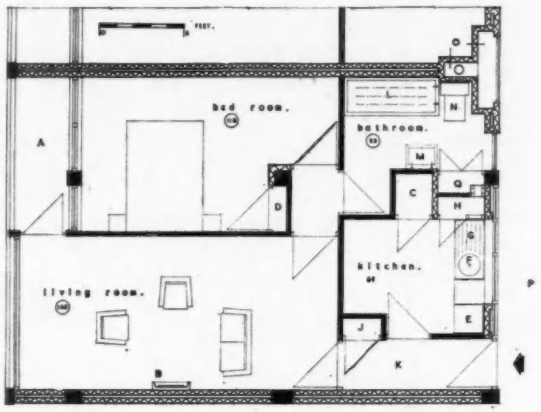
with a backing of lightweight concrete blocks. The foamed polystyrene panels are faced on both sides with asbestos, finished in colour on the exterior face. Windows are timber to standard sections except those in living rooms, which are Silux type double glazed and horizontally pivoted. These pivot through 180 degrees for cleaning internally, and all other windows can be cleaned from the balconies. Balcony fronts are of wired glass, with painted plywood panels opposite the entrance doors to flats.

Two walls at ground floor level are cast in reinforced con-

Top, private balconies on the south elevation and concrete mural on south face of the tank room. Above left, the block acts as a visual terminal to the shopping precinct. Above, meeting hall and the second of the concrete murals which are cast with pre-formed designs on the shuttering and afterwards bush-hammered



SINGLE PERSON FLAT



OLD PEOPLE'S FLAT (RIGHT)

A Private balcony
B Electric panel fire
C Cold water tank
D Cupboard
E Cooker
F Sink
G Drainer with water heater under
H Larder
J Meters
K Hall
L Bath with drying rack over
M Lavatory basin
N WC
O Service ducts
P Access balcony

A Private balcony
B Electric panel fire
C Cold water tank and water heater
D Cupboard
E Cooker
F Sink
G Drainer
H Larder
Meters
K Hall
L Bath with drying rack over
M Lavatory basin
N WC
O Service ducts
P Access balcony
Q Linen cupboard

view from south-east

community hall

Block of Small Flats, Manchester

crete with coloured glass inserts, to form a decorative effect on each side of the building. The designs were formed in the shuttering, and afterwards the walls were bush hammered to emphasise the surface patterns. The main entrance hall has a coloured mural panel executed in vitreous enamel.

Special features included in the building are a tenants' meeting hall with kitchen, and a laundry with equipment operated by slot meter. Ground floor entrance doors are controlled from each flat by telephone in the living room and push button operation for opening the doors.

Building operations commenced in March, 1960, and the block was officially opened in May, 1961. The cost of the scheme was £139,054. Architect in charge: W. Bennett, DipArch, ARIBA; assistant: D. J. Hilton, BArch, ARIBA.

sub-contractors & suppliers:

R.c. foundation & framework & concrete mural panels: Truscon Ltd.; *curtain walling and balcony balustrade:* George Wragge Ltd.; *electric lifts:* Express Lift Co. Ltd.; *thermoplastic floor tiles:* Marley Tile Co. Ltd.; *asphalt roofs and balconies:* R. H. Lord & Sons (Asphalters) Ltd.; *lightning conductors:* A. N. Wallis & Co. Ltd.; *electrical installations;* Speed Electric Service (Stoke-on-Trent) Ltd.; *floor heating cables:* Simplex Electric Co. Ltd.; *entryphone system:* Associated Electrical Industries Ltd.; *communal television and radio aerials:* Park Wireless Ltd.; *electric services:* North Western Electricity Board; *gas installation:* North Western Gas Board; *water storage tank & make and break unit:* Mather and Platt Ltd.; *booster equipment:* Pulsometer Engineering Co. Ltd.; *Silux windows:* Cawood, Wharton & Co. Ltd.; *laundry equipment:* Bendix Home Appliances Ltd.; Thomas Potterton Ltd.; Fredk. A. Pullen & Co. Ltd.; *name plaque:* J. & H. Patteson Ltd.; *metal mural:* Matthew Swain Ltd.; *lettering:* G. P. Kershaw Ltd.

Motor Age Towns

Mr. Colin Buchanan on Standards and Values

THE FIFTH REES JEFFREYS triennial lecture was delivered by MR. C. D. BUCHANAN, BSC, ARIBA, MTPI, AMICE, on the subject of 'Standards and Values in Motor Age Towns' at a meeting held under the auspices of the Town Planning Institute, at the RIBA building, 66 Portland-place, W1, on October 26. After dealing at considerable length with such aspects of the problem as 'the fundamental challenge of the motor vehicle' and 'the motor vehicle versus environment,' the speaker went on to offer some practical suggestions for dealing with the problem, and we give the following extracts from this part of his address. Mr. Buchanan said:

WITH A REAL PROSPECT of a doubling of the number of vehicles in circulation in this country within ten years, I cannot avoid the conclusion that the present difficult situation is bound to become very serious indeed. I am by no means clear what will be the best methods of coping with it, but I am quite sure that unless we keep our minds firmly fixed on a vision of urban areas as they might be, then we are likely not only to make mistakes, but to engender disasters. The main danger lies, I believe, in treating these problems as though nothing more were involved than the movement of vehicles.

Edward Higbee, writing in 'The Squeeze' (a study of space and development in the US), has a lively description of this danger as he sees it on the other side of the Atlantic: 'The community allows the highway engineers to eliminate the bottlenecks, yet after each costly elimination it is discovered that the trouble has only shifted to another location. . . . By acquiescing to one traffic emergency after another as though only a little face-lifting were necessary, metropolitan areas have allowed themselves to be overpassed, underpassed, widened, straightened and segmented by gasoline gulleys "ad infinitum," yet the headaches of congestion grow faster than the fresh supply of asphalt aspirin.'

'The Traffic Problem'

Much of the difficulty arises, I believe, from too narrow an understanding of what is usually called 'the traffic problem.' Far more is involved than the movement of vehicles or the shortage of car parks. Viewed more positively, the traffic problem is a design problem: to devise arrangements of buildings, the spaces around them, access ways and circulation routes in a manner that will permit the fullest use of the motor vehicle while at the same time retaining or creating good urban environments. The term 'environment' is vague and includes many qualities, few of which admit of measurement or even of sharp definition, but it obviously has much to do with the *appearance* of physical surroundings and also with their convenience.

If it is desired to exploit the motor vehicle to the uttermost, then the most *convenient* environment will be the one which caters for *all* movements to be performed by vehicles—a mass taking-to-wheels with universal 'drive-in.' With such an arrangement the appearance of towns would be quite unlike the familiar urban scene of today, and a new set of aesthetic 'rules' would apply—the aesthetic would be designed for people who would be peering out of the windows of vehicles whether moving or at rest.

The Pedestrian's Part

However, we need not worry very much about 'mass drive-in,' even though it is the direction in which many people would like to move, because it is a condition that cannot be satisfied along with urban compactness, the space requirements for circulation and storage being far too large. Since there must be a limit to the extent to which vehicles can approach all buildings in a compactly developed area, it is inevitable that the pedestrian must play a part in the movement systems. I daresay strong reasons of a psychological, physiological and sociological nature could also be involved in favour of walking as a means of progress, but I need not elaborate them.

Now once the need for pedestrian movement is accepted, then stringent conditions apply in order to ensure the *convenience* of that movement. The movements must not be too long nor too exhausting, and above all there must be substantial insulation of the pedestrians from the danger, noise and other adverse effects of motor traffic. This requirement for insulation is of the greatest importance in determining the physical form of development. It applies, of course, not only to pedestrians, but (in respect of the noise, fumes and vibration of traffic) to the occupants of buildings as well.

There is still, however, the appearance or visual aspect of environment to be considered. In a city with both pedestrian and motorised movement, whose 'eye-view' is going to count for most—the pedestrian's or the driver's? This is arguable. When driving you think all pedestrians should be put in subways; when walking you think drivers should be put away where nothing can distract them from the job in hand. But I do not think it is really open to question that as far as possible both eye-views should be interesting and worth looking at. Of the two, however, I would unhesitatingly give pride of place to the pedestrian. His great characteristic is that he can walk and talk and look around at the same time; he can take in wide views at a glance, he can stop instantly in order to appreciate some point the better and can thus absorb the subtleties of a scene. In other words, the pedestrian is able to derive much more from the visual environment compared with a driver whose first job is to drive, or with vehicular passengers who only get fleeting and restricted glances.

I therefore reach the paradoxical conclusion that the pedestrian's environment is of the greatest importance for the motor age, both in respect of his general convenience and what he looks at. The term 'pedestrian segregation' is much used in planning today, but it conveys neither the right idea nor the whole idea. It is vehicular segregation that is required in order to achieve pedestrian liberation.

Pedestrians should have the freedom of the city. They should be free to wander about, to sit around, to look in shop windows, to meet and gossip, to contemplate the scene and the architecture and the history. They should be treated with dignity and only as a last resort pushed down into tunnels. Discipline is the last thing they need. Above all, without being molly-coddled, for to a limited extent they must learn to mix with motors, they should be free to apply their attention to their immediate concerns without the awful thought that one false step might bring death or serious injury.

I emphasise that I do not exclude the desirability of making it worthwhile visually to drive or ride round a city, but the aesthetics for the pedestrian eye-view and the driver eye-view are necessarily different. If people are to walk about, then they are doing what people have been doing for hundreds of years in cities, and to the scenes they look at the long-established principles of civic design are still applicable. The familiar terms of scale and rhythm, contrast and repose, enclosure and surprise are still valid. For drivers, on the other hand, the view is constantly changing, details cannot be absorbed, only broad effects can register. Yet the two aesthetics ought not to be mutually exclusive—for the pedestrian there is great fascination in looking down on traffic from decks and footbridges, and the driver can be refreshed with glimpses into the pedestrian's static environment.

Minimal Design Areas

For the development of a pedestrian environment, effective in both convenience and appearance, it is obviously necessary to have a minimum area to design with, large enough to contain a useful selection of buildings with space to compose their arrangement. Such an area poses two traffic problems—the initial distribution of vehicles to suitable points of entry from outside, and the internal circulation of vehicles to their destinations.

In theory, one of these areas could cover a whole town, given a sufficiently elaborate design, but in practice the despatch of all the vehicles to the multitude of buildings is so complicated that it is necessary to canalise many of the movements along shared routes, obliging the vehicles to follow these until they reach a suitable point to turn off to their final destinations. For vehicular efficiency these shared routes must not have too many points of access and must necessarily be fairly wide with elaborate intersections, and as a result they tend to become severers of development, unless they are expensively contrived to flow

over or under the buildings. Thus the urban form is likely to consist of a *series* of environmental areas or units served by a network of roads for the primary distribution of traffic to suitable points of entry to the units. This arrangement, which is really no different in concept to the passages of rooms of a house, would seem to be the basic pattern required for the successful combination of environment and motorisation.

The Precinct Up to Date

It may be objected that this is no more than the old precinct theory brought up again. In a sense it is, but it is in a simpler and basic form. I go no further than to postulate areas where the pedestrian environment is paramount, linked by a distributory network for the traffic, whereas the precinct theory was always tied to the idea of areas of 'homogeneous use' *bounded* in the same horizontal plane by traffic arteries. On my definition the distributory network could as well pass *underneath* the environmental unit as round it.

If this is broadly the urban form required to cope with traffic, it is not difficult to see what a plight we are in in a city such as London, where the places that ought to be established or maintained as environmental units are slashed and carved by the distributory network. Oxford-street, for instance, which tries to combine the functions of a busy, popular shopping street with those of a major traffic distributor, has now degenerated as a consequence into what I regard as the most uncivilised street in Europe. If, indeed, you seek one graphic illustration of the influence of the motor vehicle on cities, you will find it in the fact that the long-standing concept of the ordinary shopping street, with pavements and traffic passing up and down, has been killed stone dead as a viable arrangement.

You may feel it is unnecessary to labour the importance of the visual environment for a nation three-quarters of whose population lives, and is going to live, in towns, but I would say that the case is far from widely accepted at the present time. I daresay most people would agree that the interior environment of buildings is important and can have depressing or enlivening effects as the case may be on the occupants, but I doubt whether many would ascribe the same importance and potential influence to exterior environments.

You can take a person into the Festival Hall, or indeed into this very building where we are now gathered, and see him visibly affected by the environment, gazing around in pleasure at the sheer interest and surprise of the place. But he takes a great deal of persuading that the spirit of it could be extended outside the building into the surroundings of his daily life. It has often been said that a nation gets the architecture it deserves, but I think this applies still more forcibly to environment. A well-designed individual new building merely reflects the enlightenment of a single client, whereas a good environment represents the collective enlightenment of a community.

Yet the ability to appreciate environment cannot be far below the surface. Thousands of people flock to Rome and Venice, Stockholm, Oxford and Cambridge and are impressed by the environments they see (in so far as they *can* see them through the press of motor traffic), but their appreciation is rooted in historicism, and they seem unable to accept that there is any lesson for their own daily surroundings. To some extent I think this may be explained by the mental confusion in which so many people find themselves over the development of modern architecture, but I daresay it is the growth of motor traffic with its blunting of susceptibilities that is mainly responsible for the ordinary person giving up the idea that urban environment has any real significance in life today. This seems little short of tragic because we are now an urban nation and we should be finding our most convincing material expression in the form and appearance of our towns.

It is not my intention in this lecture to discuss in detail the techniques for accommodating traffic in towns, but I would emphasise my belief, based on the arguments I have unfolded, that a two-part problem of design is involved—the environmental units and the distributory network. Separate considerations apply to each part, yet they are as closely related as the wards and operating theatres of a hospital are to the corridors and lifts that serve them. If, for instance, we concentrate our energies on increasing the capacity of the main distributory system, thereby stimulating still more traffic, without effecting corresponding changes to the terminal or environmental areas, then serious difficulties are bound to result. Yet it is just this procedure that is being followed in almost every city in the world; this is what causes Edward Higbee to cry out in dismay.

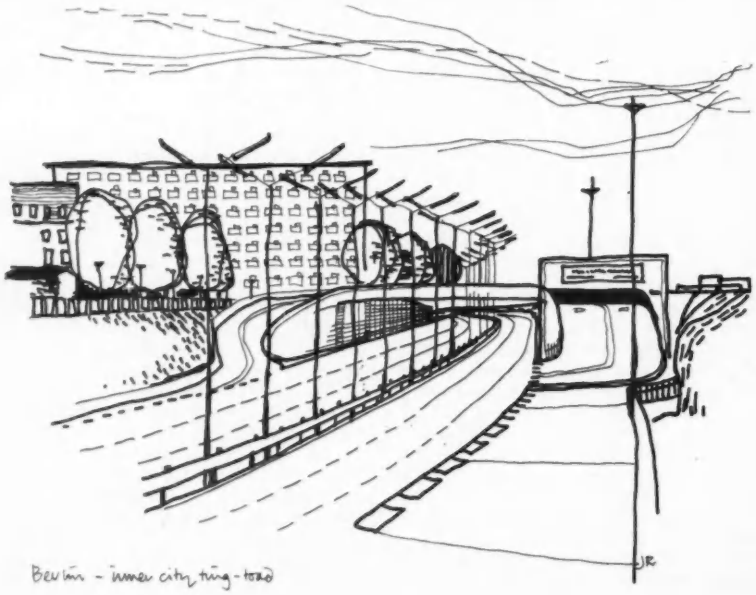
Internal-External Relationship

The analogy between circulation in a large building, such as a hospital, and traffic circulation in a town, to which I have just referred, is extremely useful and yields several points of significance. In the first place, the wards and the theatres and the other accommodation units of the hospital constitute the essence of the building; the corridors and lifts are service utilities, vitally important, but nevertheless secondary. The same relationship should apply in the city between the environmental units and the distributory highways.

Second, the design of a hospital commences with an environmental concept for the accommodation units. Thus the wards may be altered time and again during the designing process, but certain conditions, regarding aspect, outlook, sunlight, quiet, privacy and convenience of arrangement, cannot be departed from. So, I believe, the process of re-designing a town for motor traffic must start with an environmental concept for the habitable areas. This is implicit in the term 'environmental unit' which I have suggested.

Third, once environmental values have been chosen they condition the design. In the hospital they dictate the capacity of the wards, in the city they dictate the capacity for traffic. Indeed, so powerful an influence on design are the environmental requirements that I suspect in many cases in our towns it is going to be a matter of designing the environmental unit and then calculating how much traffic it will accommodate, and accepting that as the limit, rather than vainly trying to provide for incalculable and insatiable demands.

It is helpful here to recall that traffic consists of two components—a theoretically finite component comprising the essential commercial, industrial and business vehicles upon which the life of the place depends, and a vast and still growing reservoir of private cars whose presence cannot be said to be vital and which are ready at the whim of their



owners to fill up any extra capacity provided. I am not saying anything against this private car traffic other than to observe that if, in the interests of environment, traffic has to take a cut, then there cannot be much doubt where the cut must fall.

A fourth point arising out of the analogy with the hospital is that the design of environmental units and the linking of distributory system is basically a problem in architecture. I believe that a new kind of expertise is required, a kind of comprehensive big scale architecture—I have been rash enough to christen it 'traffic architecture,' and have brought criticism down on my head as a consequence, but I think I am right in saying that there is an art or a science in the arrangement of buildings for good environment, efficient circulation and economical working which requires a great deal of further study. Far from retreating from my notion of 'traffic architecture,' I am emboldened on reflection to go one step further and to say that what the motor vehicle is posing for us in cities is fundamentally a problem in architecture. Acceptance of this point would lead, I believe, to a deeper and more humanistic approach.

I have referred above to the possibility that environmental needs may put a definite limit to the amount of traffic that urban areas can assimilate. But the limit also depends upon the elaborateness of the design, and this, in turn, depends on what people are prepared to spend and how much change of scene they are prepared to accept. I have little doubt that, to extract the most from the motor, it is necessary to think in terms of at least two planes of circulation, with the motor traffic below and the pedestrians and their environment above. As a basic arrangement it has very great possibilities, but it is expensive, and it can be secured only by the reconstruction of sizeable areas.

Now whenever I mention this, people get up and say it is fantastic. Well, let them say it, but let them realise also that in rejecting the idea they are also setting a strict ceiling to the exploitation of the motor vehicle. Unless people are prepared to accept and pay for measures of this kind they will sooner or later find that they cannot use their adored vehicles to the extent they had desired. This position has already been reached in some areas, even though a good environment has not been maintained.

Oxford-street again illustrates the point. In recent years most of the buildings on the north side have been redeveloped in piecemeal fashion. If the south side follows suit, the whole street will have been rebuilt without any improvement of the environment. Yet, as a physical operation, it would have been possible to have so shaped and directed the rebuilding as to produce a magnificent shopping street with a first-class environment for shoppers and greatly improved traffic facilities. But it would have been costly (though probably not outrageously so) and it would have involved a new look for Oxford-street. If the opportunity is missed, and it has largely gone already, then it seems that nothing can be done to resuscitate the environment except to restrict the traffic, unless, of course, it be a rescue operation on the lines of Rigby Childs' ingenious scheme for an elevated pedestrian mall at a cost of some £10m.

In addition to places where we miss the opportunities through lack of readiness, lack of courage, or inability to bring about the necessary co-operation between owners and developers, there will also be places where, for reasons of aesthetics or history or even plain sentiment, we are not prepared to effect drastic changes. Here, as I see it, the traffic will have to be cut to fit the locality if the ordinary decencies of environment are to be secured.

Conclusions

I think I might summarise the general theme of this lecture by saying it has been an attempt to stake the claim of environment against the erosion of the motor vehicle. A severe difficulty is that there are no techniques for evaluating environment. It would doubtless be futile to try to devise one to cover aesthetic aspects, but it ought to be possible to produce an index that would convey the livability of an area or a street at least in respect of the standards that are so vulnerable to motor traffic—safety, quiet and cleanliness of atmosphere. With such an instrument it would be possible to compare one place with another, and a new criterion would be brought into use to balance the one which has dominated the field for so long, namely the convenience of through-traffic. Such an index applied to existing streets would reveal the true extent of the problems involved in 'living with the motor vehicle.'

Based even on minimal standards of safety and quiet I think the total problem would be revealed as far larger than anything we have so far imagined. To give but one example, many a small town which at present commands no priority for by-passing because there is no serious obstruction to the through-traffic, would nevertheless reveal an environmental problem perhaps rendered even worse by the fact that the through-traffic has a fairly free run. Environment at the moment commands no priority of its own, it is the Cinderella of town planning. A statutory town plan can be discharged to the letter, but environment can drop right out of the process.

I feel I must conclude with one word of explanation in order to ward off criticism. In suggesting that the problem we face is essentially one of big-scale architecture I am not claiming it as the exclusive sphere of the architectural profession. I think it is not without significance that most of the creative long-term ideas about urban traffic seem in fact to be emerging from the architectural profession (the work that has been done at Coventry and in the New Towns clearly has a strong wind of architectural inspiration blowing through it) but this is because architects, whose work is so closely involved with human needs, seem to be the first to realise the deterioration of environment that is now taking place.

The job as I have it in mind is essentially one for professional co-operation. I think we need a new concept of such co-operation and that the basis of it should be the acceptance of common objectives with an effort by each profession to define the contribution it can make to the achievement of the objectives. In the New Towns, in conditions which were favourable to it, the kind of co-operation I have in mind seems to have been achieved, but in many an existing town a state of misunderstanding exists between the professional officers which cannot bode well for town redevelopment.

This brings me to my final point. Even if the professions give of their best there is clearly not going to be an easy, quick or cheap solution to the problems arising from the public's avid desire for motor vehicles. Within a decade we are likely to be faced with twice the number of vehicles we have now, and our roads are already the most heavily congested in the world. As I see the position, even granted investment in new construction and urban rebuilding at unprecedented rates, the growth of traffic is going to demand a major act of self-discipline by the whole nation. It is not a traffic problem that we are faced with so much as a social situation.

Letters to the Editor

Financing Urban Redevelopment ; Health Service Architects' Salaries ; Planning Permits by Return ; Large Windows in Post-War Schools ; Architectural Photography

SIR,—I am enclosing a copy of a letter which has been sent to the Clerk of all Borough Councils and Urban District Councils with a population in their area of between 25,000 and 100,000. 'Spur' will be very grateful for any publicity you feel able to give to this matter, which they feel is an urgent one, in view of the amount of rebuilding which is already taking place in many of these town centres.

(MRS.) M. C. BAKER,
Secretary SPUR,
13 Suffolk-street, SW1.

COPY

SIR,—This Society is a group of planners, architects, engineers, economists, sociologists and business men professionally engaged at a high level in town design and development, and is affiliated to the Housing Centre Trust. We are sending a copy of this letter to the Town Clerk of every town in England and Wales whose population is in the bracket 25,000 to 100,000, with an urgent request that it be brought before the appropriate Committee.

We are doing this to draw attention to an opportunity, which once missed may not recur, to finance the replanning and rebuilding of the blighted and congested inner areas of these towns, and in doing so to relieve traffic congestion and increase the attraction of the town's established businesses, its good buildings and public spaces.

The technique we advocate can be roughly described as 'taking the rough with the smooth,' or, precisely, so organising the purchase and sale of sites that profitable and unprofitable operations go hand in hand, thus benefiting the town both financially and architecturally. For its success it depends on this sequence of operations:

1. The preparation of a large-scale phased 3-dimensional renewal plan for the centre either by the planning authority's own officers or by a consultant architect/planner, with the advice of qualified commercial consultants, if necessary.

2. The subdivision of the planned area into blocks large enough to be balanced financially as to profit-making uses (shops, offices, high-rental housing) and non-profit-making uses (roads and parking, open space, low-rental housing).

3. The purchase by the local authority or by private developers, as may be practicable at the time, of each block as it becomes ripe for redevelopment, and its rebuilding either directly or by competitive tender within the framework of the development plan.

What is the alternative? It is all too evident up and down the country, where local authorities have released those sites whose profitability is their vital asset, leaving the ratepayer and the taxpayer saddled with the cost of renewing the unprofitable sites, if and when they can afford to do so. The visible result can only be a patchwork of luxury and dilapidation and a commercial centre which as a mechanism fails to work, and as a piece of architecture fails to make any impact.

These considerations apply not only to towns whose centres require large-scale renewal, but equally to the smaller historic towns whose fine old streets are congested by parked vehicles, and whose beauty can only be restored by the opening-up and redevelopment of back land.

We are therefore urging local authorities, if they have not already done so, to press forward the preparation of imaginative and businesslike renewal plans. Applications critically affecting your town's whole future, which it would be most unwise to allow until such plans exist, may arrive in any post; so time is the essence.

'He gives way too much to his missus—but, thank Heaven, his prices are firm!'

Health Service Architects' Salaries

SIR,—Your report ('The Builder' of October 13, p. 668) on the approach of the Association of Official Architects (AOA) to the Minister of Health suggests that the association is ignorant of the constitution of the Health Service Whitley machinery and does not understand that the present arrangements cater completely for all the salaries and service conditions requirements of hospital architects.

The Minister of Health, as the Association of Official Architects will quickly learn, has no power to vary the composition of the staff side of any health service Whitley council. Only the councils themselves have such power, subject to the consent of the general Whitley council, and this is not likely to be exercised where staffs are adequately represented by existing organisations.

In the particular case of the Professional and Technical Council 'B,' the organisations constituting the present staff side, and in particular those on the staff side of its committee which deals with regional hospital board professional and technical staff, fully represent the views of architects in the service, as of the other professions, and, in addition, have experience of negotiations in this and allied fields over many years.

There is nothing in negotiations which architects can accomplish through an organisation such as the AOA, which they cannot accomplish through the present staff side of Committee F.

BEN SMITH,
Staff Side Secretary, Whitley Councils for the Health Services (Great Britain).
NALGO House, Harewood-row, NW1.

Planning Permits by Return

SIR,—The question put at the end of your leading article of October 13, is easily answered, for if it were illegal for anyone but a qualified architect and planner to submit drawings for any building, planning permission (including elevational approval) ought to follow by return!

The vast majority of planning applications are of course not architect-designed at all; despite the publicity given to the Tesco case in Chichester I suspect that the total number of architect-designed schemes which are held up, in relation to the total number of *all* schemes, is infinitesimally small.

W. ROY HURRY [ARIBA, AMTPI],
'Drummond,' Bristol-road,
Bury St. Edmunds, Suffolk.

Large Windows in Post-War Schools

SIR,—Your correspondent 'Lux' ('The Builder,' of October 13) has asked for more information regarding the insulation standards in the schools to which I referred in my letter to you of October 6.

The schools which I had particularly in mind are of widely used non-traditional systems of construction mainly clad in precast concrete or aluminium sheeting. Although I have no detailed information on their insulation standards, the high-summer temperatures attained appear inconsistent with exceptionally high standards of insulation, and the windows are certainly not double-glazed.

The high temperatures sometimes reached in winter are no doubt due to the amount of solar heat which is difficult to control in a climate where a cold foggy day can be followed by one of brilliant sun which would have been very welcome on one's last summer holiday. Moreover this strikes at a very much flatter angle than in the summer months. Factories with monitor and other forms of overhead lighting, often double-glazed and with only a small proportion of their side walls glazed, can cope more readily with these sudden changes and glare is largely avoided.

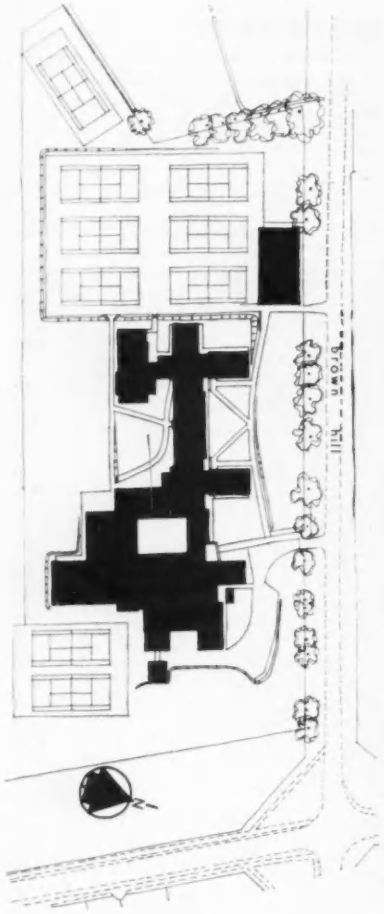
I understand that one of the most troublesome classrooms of all was a first-floor one (under a flat roof) glazed on two adjacent walls and with little cross-ventilation, i.e. a corner classroom. Double glazing, sunshades and blinds are

(Continued on page 775)

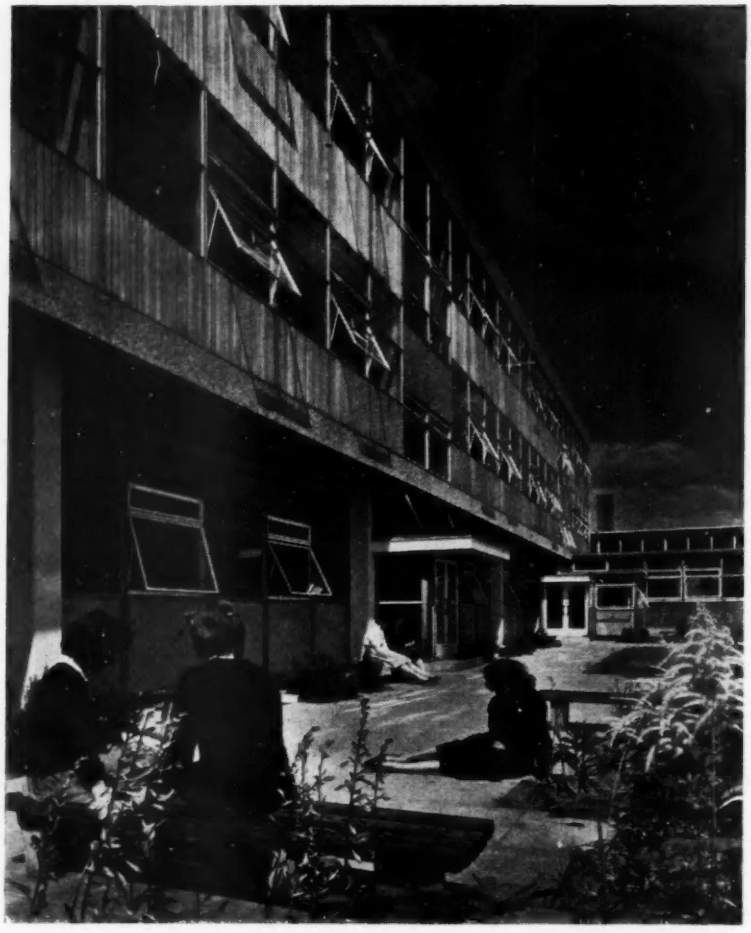
Millbrook Secondary School, Southampton

HOWARD V. LOBB & PARTNERS, F/FRIBA, architects
E. C. SWEETMAN, ARIBA, associate architect in charge
C. E. BALL & PARTNERS, F/FRICS, quantity surveyors
BRAZIER & SON LTD., general contractors

3-storey classroom wing

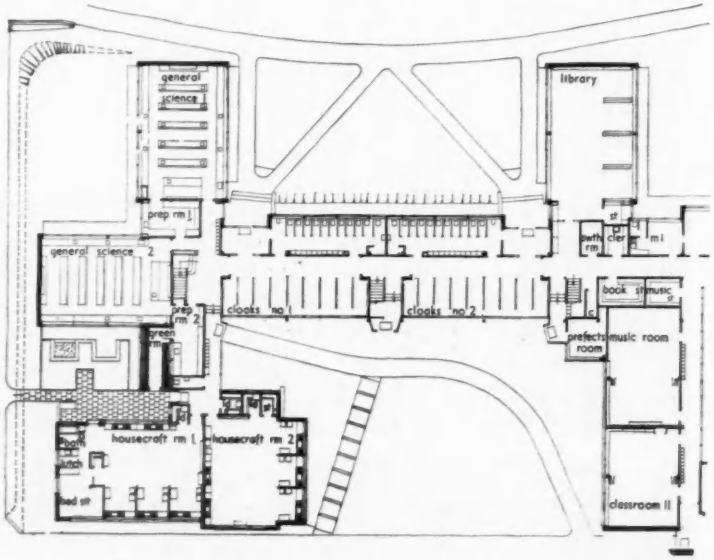


view from north-east



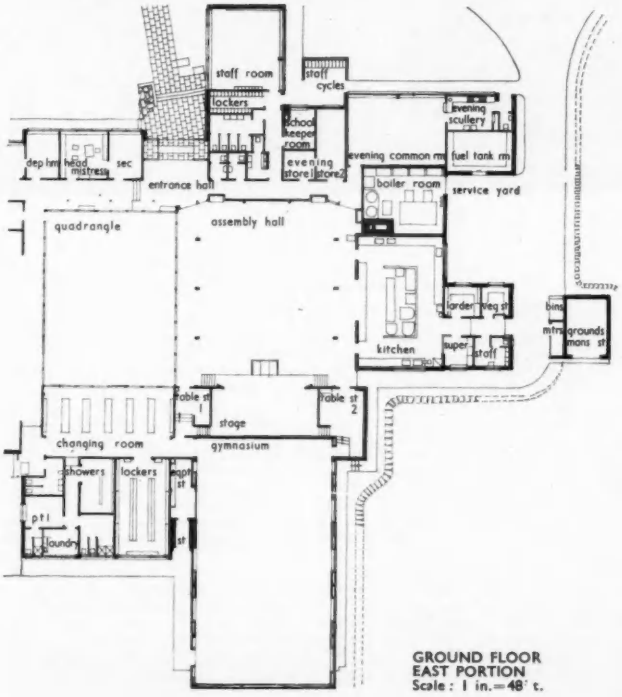
front of teaching wing, looking east

view from north-west



GROUND FLOOR
WEST PORTION
Scale: 1 in. = 48 ft.

library and art room wing, from west



GROUND FLOOR
EAST PORTION
Scale : 1 in. = 48' t.

MILLBROOK SECONDARY GIRLS' SCHOOL has been planned as a 'three-form entry' school, admitting three new classes each year for a five year course. It contains fifteen 'form-bases' which means that in terms of classes of thirty, the school has nominal accommodation for 450 pupils. There are, however, altogether twenty separate teaching rooms in the building and sets of pupils' lockers have been provided in relation to the various specialist rooms to allow their use as form-bases, so that without undue inconvenience the school can in fact accommodate up to 600 pupils when numbers on roll reach their peak.

The new school was sited near Lower Brownhill-road, with its main axis running east to west, in order to impinge as little as possible on the playing field area between the girls' and boys' schools, and to reduce the run of access and service roads. The school meals kitchen and the boiler house were placed to the east, near the main Romsey-road, with the teaching accommodation on the quieter western side.

The main classroom block is of three-storeys. Cloakrooms and lavatories open off the ground floor corridor, while circulation to the upper floors is by three staircases, so that there are no long corridors on these floors and the 'through' classrooms are lit directly from either side. Two-storey wings at right angles to the main block contain the spacious art and craft and needlework rooms, together with an attractive library, centrally situated off the main corridor. At the western end of the building on the ground floor are two science laboratories and two housecraft rooms. One of the latter incorporates a demonstration flat.

A single storey link, which contains the entrance hall and administrative rooms, continues around an enclosed central courtyard to the music room and the gymnasium, with its adjoining shower and changing rooms. The eastern side of the courtyard is formed by the side aisle of the assembly hall, which leads directly off the entrance hall.

The large assembly hall, which is provided with a well-equipped stage, is also used for dining on a 'family service' basis. Meals are served from the adjacent kitchen, which is planned to provide 300 dinners a day. The gymnasium, measuring 70 by 40 feet, is fully fitted with climbing and agility apparatus and is provided with a spacious equipment store.

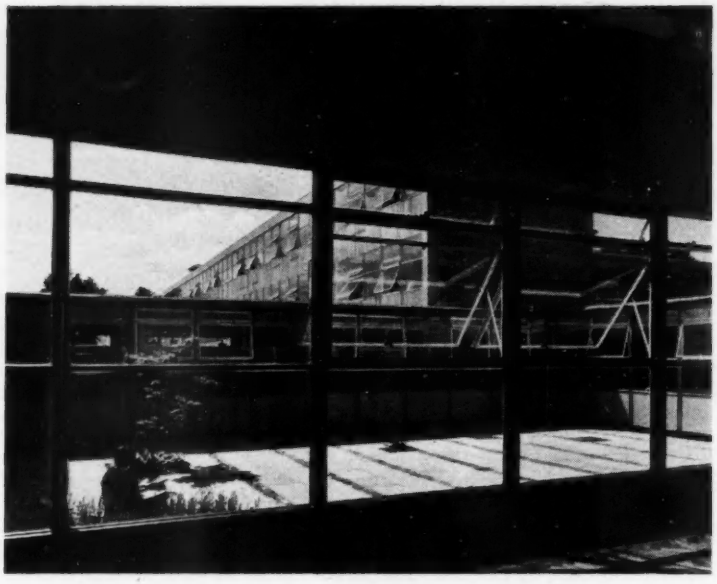
Adjacent to the entrance hall is the additional accommodation — common room, scullery, stores, etc., largely self-contained with its separate external entrance—intended to facilitate the use of the school premises by voluntary organisations. Similar provision for 'evening use' is now a feature of all new secondary schools in Southampton, the Ministry of Education in each case allowing an increase of £3,500 on the normal cost limit for the building.

In addition to the excellent playing fields, shared with Millbrook Boys' School, there is the usual paved playground at the western end of the school, flanked by cycle shelters and enclosed with high fencing to allow the area to be used as six tennis courts as well as for netball. There are also three enclosed grass courts.

The building is partly of steel frame construction clad externally with light timber curtain walling, the three storey block being of brick cross wall construction, while the assembly hall and gymnasium block is constructed of portal steel frames with brick cladding. Internal wall surfaces throughout are plastered and painted in neutral colours in the teaching rooms, with brighter colours introduced in selected places throughout the building. Floors generally are in vinyl and thermoplastic tiles laid in patterns. The floor of the hall is of a warm coloured hardwood block: Granwood flooring has been used in the gymnasium, where underfloor heating is installed. The school is heated by radiators and convectors and a low pressure accelerated hot water system maintained by oil fired boilers.

Messrs. Braziers' tender, the lowest of nineteen received, was accepted in the sum of £151,604. The contract period was twenty-four months. The contractor began work in July, 1958, and handed over the buildings, complete except for minor details, on 29th July, 1960. The school was occupied for teaching on 5th September, 1960. In addition to the capital cost of building the school, initial furniture and equipment will cost about another £15,000, making the total expenditure on the school approximately £166,000.

L. Berger, Dipl Arch, ARIBA, Borough Architect, and F. L. Wooldridge, MICE, Borough Engineer, worked in co-operation with the architects on various aspects of the contract. Colin E. Rolf, ARIBA, was the assistant architect.



quadrangle from assembly hall

typical classroom

sub-contractors & suppliers:

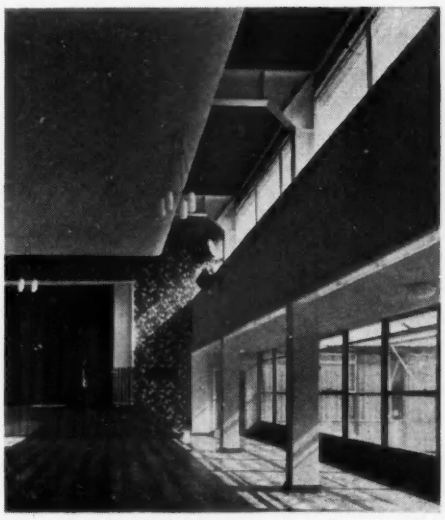
Electricity supply: Southern Electricity Board; *gas supply:* Southern Gas Board; *water supply:* Southampton Waterworks Dept.; *structural steelwork:* Metal Constructions Ltd.; *rod reinforcement and 'Stahlton' units:* Costain Concrete Co. Ltd.; *heating, hot & cold water, gas and ventilation:* Rosser & Russell Ltd.; *felt roofing & tile surfacing:* Limmer & Trinidad Lake Asphalte Co. Ltd.; *lantern lights, metal windows & opening gear:* Crittall Manufacturing Co. Ltd.; *domed roof lights:* T. & W. Ide Ltd.; *electrical installation:* Barlow & Young Ltd.; *asphalt work:* Neuchatel Asphalte Ltd.; *playing field preparation & site layout:* Mervyn King & Son; *sanitary fittings:* John Bolding & Sons Ltd.; *Marleyrail, Marleyflex, vinyl & mosaic sapele flooring:* Marley Tile Co. Ltd.; *precast concrete dressings, bench seats & sink slab:* Southern Concrete Sales; *'Armourply' w.c. cubicles:* Wm. Mallinson & Sons Ltd.; *fibrous plaster proscenium arch:* G. J. Green & Sons; *curtain track, floor winch & ironmongery:* Wm. Dibben & Sons Ltd.; *Granwood flooring:* Granwood Flooring Co. Ltd.; *West African mahogany flooring:* Horsley, Smith & Co. (Hayes) Ltd.; *'Hy-rib' lathing suspended ceiling:* Scaffolding (Gt. Britain) Ltd.; *perforated metal covers to radiators:* Rosser & Russell Ltd.; *safety treads:* Adamite Co. Ltd.; *electric incinerators:* Hygienette Manufacturing Co.; *cycle shelter steelwork:* J. R. Smith & Sons (Structural) Ltd.; *joinery fittings:* The Southern Joinery Co.; *sliding door gear:* Kennedy Ltd.; *entrance gates:* Caslake Ltd.; *fencing:* J. B. Corrie (Flextella) Ltd.; *wire mesh panels to cloakroom fittings:* A. J. Binns Ltd.; *trees and shrubs:* John Waterer Sons & Crisp Ltd.; *revolving surface chalkboards:* Wilson & Garden Ltd.; *Eternit Eamille panels:* G. R. Speaker & Co. Ltd.; *stage curtains & fittings:* W. J. Furse & Co. Ltd.; *furniture:* Ellington Industries Ltd.

entrance hall

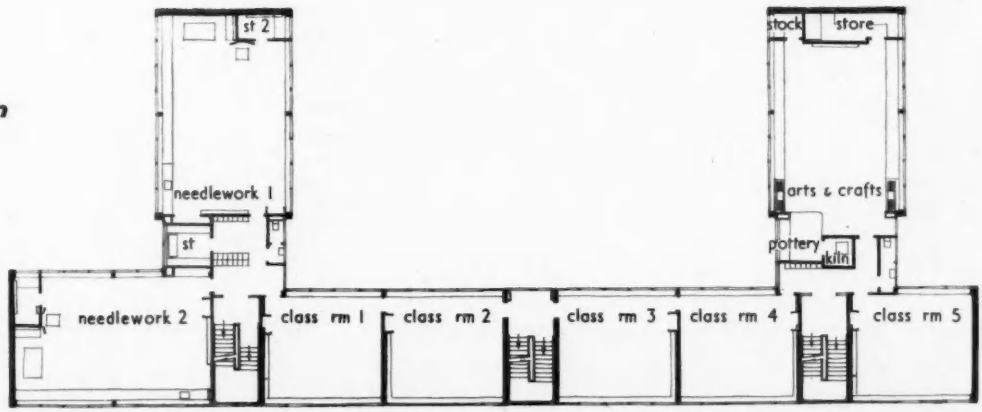
corridor and lockers

art and crafts room

assembly hall



Millbrook School Southampton



UPPER FLOOR CLASSROOMS
Scale :
1 in. = 32 ft.

Paul Waterhouse, 1861-1924

Centenary of One of a Family of Architects

BY FRANCES COLLINGWOOD

ARCHITECTURE has been in the Waterhouse blood for over a century, and is still going strong in the fourth generation today. This month holds the birth centenary of Paul Waterhouse, which momentarily picks him out from among the rest, and gives to his career a particular interest. He was born at Manchester on October 29, 1861, the son of Alfred Waterhouse. When he was four years old, his father was given the commission for South Kensington's Natural History Museum, and the Waterhouse family left Manchester to live in London.

Paul was sent to Hawtrey's preparatory school at Slough and, from there, proceeded to Eton, and Balliol College, Oxford, where in 1882 he gained a second class in classical moderations and where he became a keen rowing man. He was a delicate boy, never much good at games, but he coxed his college eight and was captain of the college boat club in 1883, although he never gained a blue.

The qualities of tact, initiative, and the ability to sum up a man's character were all developing during his Oxford days, qualities that were to stand him in good stead during the professional years to come. When he left Oxford, Waterhouse went straight into his father's office, where he became a partner in 1891, having been awarded the essay medal of the RIBA five years earlier. In 1905 the death of his father, who had been partly paralysed for the previous four years, left him to run the practice alone, which he did until 1919, when he was joined by his son, Michael, on his return from army service in the Middle East.

Father's Mantle

Alfred Waterhouse had been well known for the public and business buildings he had designed, and to Paul fell the task of completing and continuing these works. Among them were the Royal Infirmary Buildings, Liverpool, and laboratories and other extensions at Manchester and Leeds Universities, St. Mary's Hospital, Manchester, and University College Hospital, London.

Another mantle that fell upon his shoulders from his father was the erection of assurance offices. What Alfred Waterhouse had done for the Prudential and the Refuge Assurance Companies, Paul Waterhouse continued for the former in some of our principal provincial cities. He also worked for the Atlas Assurance Company for which he designed new premises at Birmingham, and additions to their Head Office in Cheapside. It was but a short step from this type of commercial building to banks, and Paul Waterhouse was responsible for designing branches of the Lloyds and National Provincial Foreign Banks in Paris, Brussels and Antwerp. He also enlarged the National Provincial's head office in Bishopsgate.

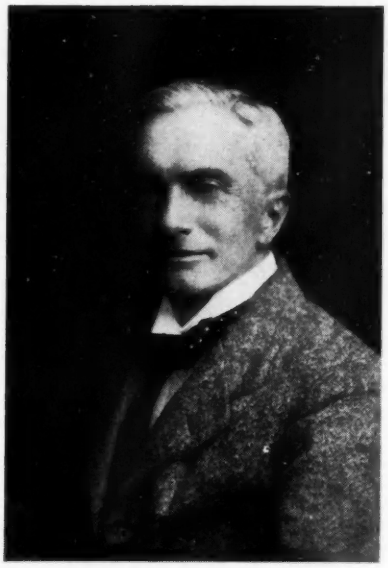
A marked flair for planning, inherited from his father, and which a contemporary once described as 'exquisite and workable,' was Paul Waterhouse's strength. Among other important university buildings he designed were the Dyson Perrins Laboratories at Oxford, and the Younger Commemoration Hall at St. Andrews, in which city he also built St. Regulus Club. Earlier he had designed several hospital buildings, among them a medical school and nurses' home at University College, London (1905); offices for the Royal National Pension Fund, Buckingham-street, Strand (1906); extensions to the Lister Institute of Preventive Medicine, Chelsea Bridge-road (1908); wards for Bromley and District Hospital, Kent (1910), Yeovil and District Hospital (1921); and St. Leonard's Hospital, Sudbury (1922).

In addition to these public buildings, Waterhouse found time for a considerable amount of domestic and ecclesiastical work, where the personal character of his design is clearly expressed. The best examples are probably, 73 South Audley-street, London; Mount Melville, St. Andrews, with its stables, farm buildings, cottages and formal gardens; All Saints Church, St. Andrews; St. Francis's Church, Hammerfield, Herts; and the Convent of the Incarnation at Oxford. He was an authority on town planning and worked on several schemes for the development of the South Bank and the London bridges.

An excellent draughtsman, Paul Waterhouse was equally at home in line and wash drawings, which he effected with great delicacy and charm. In 1903 he illustrated William Sanday's 'Sacred Sites of the Gospels.' He was also very proficient in the art of public speaking and writing. As might be expected he wrote about architecture and, in so doing, managed to express himself with a characteristically humorous as well as scholarly charm.

Published Literary Work

Six years after his death, a selection of his speeches and papers were published by the Oxford University Press under the title 'Paul Waterhouse, A Collection of Certain of his Papers and Addresses.' The link with literature had been strong throughout his life—his uncle was Thomas Hodgkin, the eminent historian, and his eldest sister married the poet, Robert Bridges.



Paul Waterhouse, PRIBA, from a photograph taken in 1921

Although his own practice was pretty demanding, Waterhouse found time to think about the young and struggling architect. He was anxious that all possible facilities for training should be at the disposal of the student and to this end he did everything in his power to promote schools of architecture in London and the provinces. For two years (1921 and 1922) he was president of the RIBA, bringing to this office invaluable leadership during a very difficult period.

In 1887 Paul Waterhouse married Lucy Palgrave, daughter of the Clerk of the House of Commons, by whom he had one son (Michael Waterhouse, CBE, MC, President RIBA 1948-50) and two daughters. He died at his home at Yattendon, Berkshire, on December 19, 1924.

Manchester Society of Architects

Reception at Manchester Building Centre

THE MANCHESTER SOCIETY OF ARCHITECTS and the Manchester Building Centre, on September 9, acted as hosts to over 160 architects from the Blackpool and Fylde Architectural Society, the Liverpool Architectural Society, the North Lancashire Society of Architects, the North Staffordshire Architectural Association, the North Wales Architectural Society, the Oldham Society of Architects and the Southport Architectural Society. Architects came to visit the Manchester Building Centre where a reception was held, and to see two of the important new buildings in Manchester—the £1¼m. Courts of Justice and the CIS office block now under construction.

This combined visit was most successful and the Manchester Society of Architects anticipates arranging more functions of this kind in conjunction with the Manchester Building Centre.

Letters—*continued from p. 768*

all expensive and, as the users complain of glare as well as exhaustion from oppressive heat, the remedy in future schools would appear to lie primarily in a reduction of the amount of glazed walling, coupled with top light where possible. Delightful though extensive windows are in some respects, it has to be borne in mind that a large number of class-rooms are deliberately planned to face south, that they are too crowded to enable those closest to the windows to be moved further away, and that too good a view of the football game or physical education outside may distract at least some of the less studious pupils.

H. S. HOWGRAVE-GRAHAM [ARIBA] (alias 'DAZ'),
105 Three Bridges-road,
Crawley, Sussex.

Architectural Photography

SIR,—When I receive my copy of 'The Builder' each week I must confess that I first turn to Mr. Arthur Kenyon's 'More Everyday Things.' They are written with such a tolerant and amusing understanding of the ways of architects and all those engaged in the building industry. As one who has spent most of his life as an architectural photographer I found in No. 63 'Architectural Photography' (your issue of October 13) much to agree with and to be amused by.

The photograph can make or mar the worst and the best of a building in no uncertain way. The play of light and shadow is all-important in these days of buildings without all the frills and furbelows of bygone ages, and the photographer's problem in this country is our uncertain weather allied with those terms now in daily usage 'very urgent' or, worse still, 'wanted tomorrow.' There are, however, snags in every vocation and the architectural photographer is fortunate in having to be constantly on his mettle pleasantly to surprise his client—particularly so, when left to use his own initiative.

One day, maybe, a photographer will write about his experiences in the building industry. This could be quite interesting seeing so much from the other side, for he is at times on the job from the site views, by way of the drawings and the model, through the progress to the completion of the building. Maybe when the client is well settled in, another visit is made and at odd times he receives the client's reaction.

To be quite honest this is generally quite favourable but the photographer is on occasion the recipient of the other side of the story, when tact and understanding are certainly essential. I well remember an incident many years ago when, on visiting a country house to take photographs, I was ushered in by an old maidservant. I heard myself being announced to an even older and apparently very deaf owner as having arrived to 'photograph the house,' the maidservant ending *sotto voce* 'and I hope he photographs all the inconveniences.'

SYDNEY NEWBERY [FIBP, FRPS]
7 Stockwell-terrace, SW9.

News of the Week

Trade and Technical Literature

DETAILS have been announced of the fifth annual Competition for Trade and Technical Literature, sponsored jointly by the Royal Institute of British Architects and the Building Centre, London. The conditions are the same as in previous competitions. All entries must be received at the Building Centre by midday on April 30, 1962. These should be addressed to the Director at 26 Store-street, London, WC1, from whom further details and entry forms may be obtained.

The Reynolds Memorial Award

NOMINATIONS are now being received for the 1962 annual $25,000 R. S. Reynolds Memorial Award, the largest award in architecture. This international, now in its sixth year, is conferred on an architect who has designed a signlficant structure in which aluminium has been used creatively. In addition to the $25,000 honorarium, the award includes an original piece of sculpture designed by a prominent contemporary artist. An architect may be nominated by anyone, including himself or his firm. Nominations may be made by writing to the Reynolds Award, American Institute of Architects, 1,735 New York-avenue, NW, Washington DC, including the architect's name, address, the location of the structure to be considered, and the date it was completed. Such nominations will be accepted until December 18. The award will be conferred during the AIA convention at Dallas, Texas, from May 7 to 11, 1962.

Northern Ireland Housing Trust

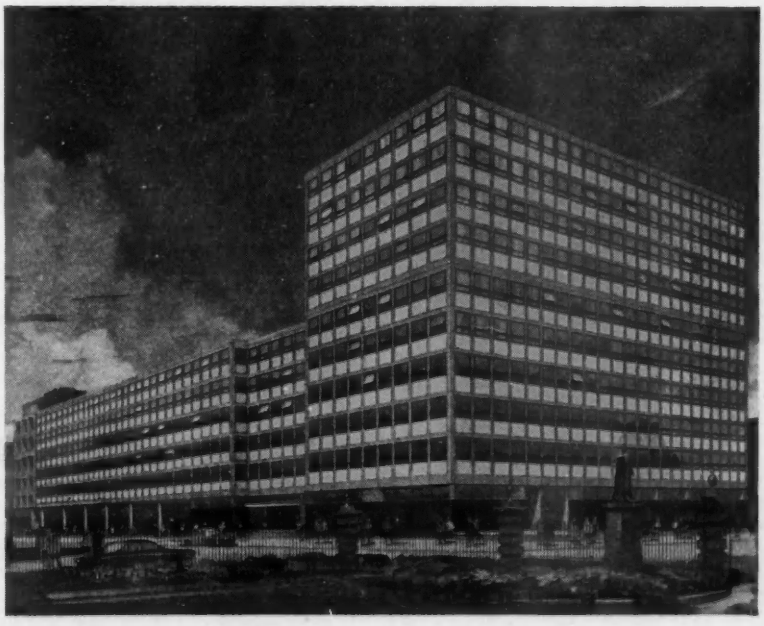
A COMPREHENSIVE ACCOUNT of the current activities of the Northern Ireland Housing Trust is given in its report for the year 1960-1961. Building progress is said to have been disappointing owing to wet weather and the scarcity of skilled labour, but nevertheless fresh contracts for 2,254 dwellings were let and 1,505 dwellings were completed. On March 31 this year a total of 3,797 dwellings were being built or under contract.

The most important events of the year were the preparation of plans for redeveloping a large part of Londonderry City; the special arrangement with Belfast Corporation for the Trust to build houses outside the city boundary for applicants on the Corporation list; and Professor Robert Matthew's interim report on housing sites in the Belfast area, on which action has been taken in all cases but one. The sixteen pages of half-tone illustrations given in the report include a layout and a model of the proposed redevelopment of the Rossville-street and Leckey-road area at Londonderry, together with many photographs of the different types of housing on several of the Trust's estates, the architectural quality of which is excellent. A few plans would have added considerably to the interest of this excellently produced report, which is issued from 12 Hope-street, Belfast.

Manchester City Architect's Department

ACCORDING TO a report in the 'Manchester Evening News' about £80,000 a year is being spent by Manchester Corporation

EUSTON ROAD OFFICES AND FLATS.—*Perspective of the proposed redevelopment of the site at the junction of Euston-road, adjoining St. Pancras Church, by the construction of a £600,000, ten-storey building to accommodate about 64,000 sq. ft. of office space on the ground and first five floors, with flats above. John Laing Construction Ltd. is to begin work shortly on the project, which is due for completion by mid-1963. Architects are Messrs. Russell Diplock Associates, and Messrs. E. C. Harris and Partners are the quantity surveyors*



to private consultants because of the shortage of staff in its architect's department. Private consultants are employed, it is understood, because the city cannot compete for senior staff with the salaries offered elsewhere. In an effort to overcome this problem the city architect, Mr. S. G. Roberts, ARIBA, has devised a scheme which provides for a complete reorganisation of his department. The main points are understood to be (a) 'Adequate' salaries for the existing senior staff; (b) more positions at higher grades; and (c) adequate accommodation instead of the present scattered offices all over the city. Mr. Roberts, whose scheme is being considered by the corporation, is also understood to be suggesting an increase in staff of the department of 17, giving a total of 310 compared with the present 293. Salaries would also rise by £40,000.

City Church Reconsecrated

ST. ANDREW'S CHURCH, HOLBORN, which was completely destroyed during the war with the exception of the tower and bare walls, has been rebuilt to designs by Lord Mottistone, OBE, FRIBA, and Mr. Paul Paget, LRIBA, who have followed the original design by Sir Christopher Wren, and was reconsecrated by the Bishop of London on October 25. The rebuilt church, which is the biggest Wren parish church in the city, incorporates various items from the old Foundling Hospital and St. Luke's, Old-street, and an east window designed by Mr. Brian Thomas and Lord Mottistone, which includes features contained in three windows in the earlier church.

Cost Planning Postal Course

A POST-QUALIFICATION POSTAL COURSE in cost planning has been arranged by the College of Estate Management. It will comprise eleven papers written by different contributors, and a one-day conference at the college in the spring of 1962. The fee for the course is £10 10s. plus an additional charge for those attending the conference. Aspects of the subject covered will include the concept of cost planning, the factors determining the client's budget, the information required by the architect, two systems of cost planning, and the technique of handling and collecting building cost information. The final paper will summarise the arguments and compare the system with those in other industries. Details are available from the registrar to the college, St. Alban's-grove, London, W8.

IoB Midland Branch Dinner

THE Midlands branch of the Institute of Builders is holding its first annual dinner at the Grand Hotel, Birmingham, on Tuesday, November 7. The chairman, Mr. Frank Russon, FIOB, will attend and will be invested with the branch collarette by the president, Mr. J. Gowing Middleton, FIOB. Tickets for the dinner (men only) may be obtained, price £4 4s. each, from the hon. secretary to the branch, 71 Dorchester-road, Solihull, Warwickshire.

'Towards New City Centres'

A COURSE of six weekly lectures with illustrations and discussion entitled 'Towards New City Centres' has been arranged by the University of Hull Department of Adult Education, in conjunction with the School of Architecture, Regional College of Arts and Crafts and the Hull Chapter York and East Yorkshire Architectural Society. The course (fee 7s. 6d.) is being held at the University, Hull, on six consecutive Thursday evenings, and began on October 26 with a general introduction by Mr. P. E. Johnson-Marshall, ARIBA, AMTPI.

Appointments and Retirements

MR. VINCENT BROWN, ARIBA, of 35, King's Acre-road, Hereford, has been chosen from seven candidates as the new county architect for Herefordshire.

MR. W. V. SMITH, ARIBA, deputy borough architect, Luton, has been appointed borough architect, Reading, to succeed MR. C. H. A. WILLETT, FRIBA, who is retiring.

MR. P. J. MITCHELL, FRICS, MRSH, AMIPHE, FIAS, surveyor and engineer to Hartley Wintney RDC for 12 years, is leaving municipal service to take up a private partnership.

MR. E. SIMPKIN, AMICE, MIMUNE, AMTPI, surveyor to Consett UDC, Durham, for 11 years, is to retire at the end of October.

MR. ALAN EARNSHAW, chief architectural assistant to Bingley (Yorks.) UDC, is moving to become chief architect at St. Annes-on-Sea.

MR. ROWLAND COWBOURNE, ARICS, deputy surveyor of Bingley Council has been recommended by Finance and General Purposes Committee for promotion to the post of surveyor and architect and lighting engineer. He is to succeed Mr. J. S. Lattin, surveyor and architect for the past 17 years.

Obituary

E. B. Elford

WE REGRET to record the death of Eric Benjamin Elford, LRIBA, AIQS, of Green Shutters, 29 Churchfield-road, Poole, Dorset.

A Hundred Years Ago

From 'The Builder' of Oct. 19, 1861

TELEGRAPHIC PROGRESS.—The London Telegraph Company propose to enter into contracts with business establishments, whereby the subscribers will be enabled to send or receive an unlimited number of messages, exclusively on their own business, at greatly reduced charges. Thus, for instance, a house of business would advise all their customers that they can send them messages, without prepayment, whenever any particular goods are required; and any general trade notice may be sent in a similar way. The subscription is proposed to be at the rate of £1 for every 100 messages.

Coming Events

MONDAY, OCTOBER 30

ROYAL SOCIETY OF BRITISH SCULPTORS.—Joint meeting with Art Workers Guild. Reynolds-Stephens Memorial lecture: 'St. Peter's and St. Paul's, by Mr. A. Bertram. 6 Queen-sq., WC1. 7 p.m.

TUESDAY, OCTOBER 31

EFFLUENT AND WATER TREATMENT EXHIBITION.—Seymour Hall, W1 (until Nov. 3).

WEDNESDAY, NOVEMBER 1

TOWN PLANNING INSTITUTE.—Installation of Mr. J. G. Jefferson as president for 1961-2, followed by presidential address. Bishop Partridge Hall, Church House, Gt. Smith-st., SW1. 6 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS (NORTHERN COUNTIES BRANCH).—'The Volta Bridge,' by Mr. C. R. Blackwell. Neville Hall, Newcastle. 6.30 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS (WALES AND MONMOUTHSHIRE BRANCH).—Chairman's address by Mr. E. Hughes. Mackworth Hotel, Swansea. 6.30 p.m.

THURSDAY, NOVEMBER 2

FEDERATION OF REGISTERED HOUSE-BUILDERS.—One-day conference. Connaught Rooms, London, WC2. 10.15 a.m.

INSTITUTION OF ELECTRICAL ENGINEERS.—'Acoustics and the Electrical Engineer,' by Mr. T. Somerville. Savoy-pl., WC2. 6 p.m.

ARCHITECTS' BENEVOLENT SOCIETY.—Ball. Mere Golf & Country Club, Cheshire. 8 p.m.

FRIDAY, NOVEMBER 3

LMBA.—Presentation of 1961 LMBA Medals, by Field Marshal Viscount Slim. Fishmongers' Hall, London Bridge, EC4. 3 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS (SOUTH WESTERN COUNTIES SECTION).—Chairman's address by Mr. J. D. Norfolk. Grand Hotel, The Hoe, Plymouth. 6 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS (MIDLAND COUNTIES BRANCH).—Graduates' and students' section: 'Proposed Bridge over the English Channel,' by Dr. A. R. Flint. Engineering Centre, Birmingham. 6.30 p.m.

SATURDAY, NOVEMBER 4

INSTITUTE OF BUILDERS' DISCUSSION CLUB.—Annual dinner and dance. Kensington Palace Hotel, W8. 6 p.m.

Professional Announcements

KENNETH DRAPER, ARIBA, and B. W. FIJALKOWSKI, ING.ARCH., ARIBA, have become associates in the firm of FRANK RUTTER, FRIBA, 60 Woodbridge-road, Guildford, Surrey. Telephone: 60235.

MR. LESLIE H. KEMP, FRIBA, MRAIC, chartered architect, is now at Lloyds Bank-chambers. The Borough, Yeovil (tel.: Yeovil 1438).

MR. KEITH G. KELLETT, ARIBA, in practice at Lennards-chambers, Regent-street, Rugby, has opened an office at Lloyds Bank-chambers, The Square, Market Harborough (tel.: 3080), where he would be glad to receive trade catalogues and literature.

MESSRS F. B. BRYDEN AND PARTNERS, chartered quantity surveyors, of 33 Catherine-place, London, SW1, are with effect from November 1 changing their address to Wilmex House, 151/153 Clapham High-street, Clapham Common, London, SW4 (tel.: Macaulay 9238/9).

MR. R. R. PIPER, ARICS, and MR. D. H. RICHARDSON, ARICS, have amalgamated their existing practices and will now practice under the style of PIPER & RICHARDSON, chartered quantity surveyors, from Bank Chambers, 329 High Holborn, London, WC1. Telephone: Chancery 6300.

MESSRS. BAKER, MALLETT & PARTNERS, quantity surveyors of Grosvenor-gardens-house, SW1, and 54/56 Albert-road, Middlesbrough, have opened an office at 18 Thorpe-road, Norwich, telephone Nor. 04T. in the charge of MR. F. P. C. CHAMBERS, ARICS.

MR. BERNARD N. MILES, ARICS, AIQS, chartered quantity surveyor, has commenced in practice on his own account at Bracken House, Northway, Bracknell, Berks. (tel.: 1857) and will be pleased to receive trade catalogues.

Architecture, Planning & Construction Abroad

A Monthly Analysis of Technical Magazines

The technical newspapers and publications issued from the European countries contain a wealth of data on architecture, planning and techniques and construction which are rendered largely useless to the British architect and technician by reason of language. For this reason 'The Builder' proposes to print monthly until further notice (a) an analysis by country and subject of the principal European magazines accompanied by (b) summaries or (where the importance justifies) fuller translations of articles. As an additional service, a full translation of any particular article can be supplied, on a fee basis. Inquiries should be addressed to The Editor.

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Town Planning

XX10.—New Town Centre in Helsinki

THE PROJECT is conditioned by traffic technique and prestige. The siting of the new centre lies in the area between the river Töölö, the railway station and the Parliament house. Under the prevailing traffic conditions of today, one must proceed from a combination of streets and open places directly designed for motorised traffic, special consideration being taken into account for pedestrian traffic. All parking areas are covered. Terrace-like rising and falling areas can be made of the covered parking, including the station goods yard.

The proximity and dominant situation of the Parliament House imposes definite demands upon the formation of the new city area. In the present preliminary proposal, the open *place* faces the Töölö inlet in a triangular shape with radial terraces. The open area consists of three pillared decks on different levels which directly communicate with the parking areas without using stairways. Parking and pedestrian ways are combined with shop premises. In the pedestrian part along the Töölö inlet, a number of municipal buildings can be sited.

Public buildings would be accessible for both pedestrian and two-lane car traffic. A new motorway will be built for vehicular traffic directly into the heart of Helsinki, with three or four traffic lanes in each direction. The point where motor traffic forks off in the Town Centre does not consist of roundabouts, but is led on to different planes so that usual level crossings are not necessary. (*'Arkitehti' (Finland) No. 3, 1961*).

XX29.—New Housing Quarter in Kiev

BETWEEN 1956-60, 121,600 sq. metres of housing were built. Approximately 50 per cent of all new quarters are planned on new sites outside Kiev. These 'satellite towns' are connected to the centre of Kiev by an arterial road. A further 330,000 sq. metres are to be used for housing. (*'Architecture in USSR' (Russia) No. 8, 1961*).

Housing

X3.—Housing in Belgium

SEVERAL EXAMPLES of private houses are illustrated: (1) a bungalow near Louvain; (2) private house at Waterloo; (3) house for a painter. (*'Rhythme' (Belgium) No. 34, 1961.*)

X11.—Maison Carré: House in France

THE HOUSE shown was built for M. Carré, the well-known art dealer, planned to combine family living with M. Carré's collection of modern paintings. The house (designed by Alvar Aalto) is built of the same stone as Chartres Cathedral. As usual with A.A., not a single detail is overlooked, and all fittings such as door handles, spot lights, metal legs for armchairs, etc., are designed by him. (*'Arkitehti' (Finland), No. 3, 1961.*)

XX13.—Housing Estate in Ivry—Petit Bourg

AN INDUSTRIAL CONCERN, with the aid of the municipality, has built in the last six years a housing estate for a population of 3,500, consisting of three blocks of flats comprising respectively 350, 56 and 96 flats. 130 individual dwellings have been built on the south-east side of the estate and 40 more are planned, part of a further 350. A school of 29 classes (40 pupils to a class) is planned, also houses for teachers. A new Town Hall, assembly hall and a social centre will become part of the future development.

A new departure from the established social practice was taken into consideration, whereby other industrial groups were invited to distribute their overflow of workers; one-third of future dwellings will be reserved to them. (*'La Construction Moderne' (France), No. 4, 1961.*)

X15.—Italian housing

SIX RECENT buildings in Versilia, off Tuscany's coastal area, are illustrated. There is a new departure towards a 'hotel house,' combining the privacy of family life with the comfort of a hotel. (*'Architettura' (Italy), No. 5, 1961.*)

Churches

X1.—Austrian Churches

THE ISSUE is given over to recent church buildings in Austria. (1) In Neu-Arzl near Innsbruck; (2) parish church in Steyr-Ennsleiten; (3) parish church in Vienna XIV; (4) parish church St. Florian in Vienna V; (5) parish church St. Theresa in Linz on the Danube; (6) church in Haid near Linz; (7) chapel in a students' hostel in Vienna I; and (8) Rosenkranz church in Vienna XII. (*'Aufbau' (Austria), June, 1961.*)

X12.—Churches in Two Hemispheres

THE ENTIRE ISSUE is given over to illustrations of recent church buildings in many countries:

France, Italy, Norway, Germany, Switzerland, Belgium, Netherlands, Canada, Denmark, USA, Finland, Spain and Uruguay. (*'Architecture d'Aujourd'hui' (France) June-July, 1961.*)

X16.—Mendelsohn Church, Minnesota, USA

PRELIMINARY SKETCHES of the late Eric Mendelsohn for the temple and social centre of the Mt. Zion Community at St. Paul, Minnesota; the project was completed after his death. (*'Architettura' (Italy), No. 5. September, 1961.*)

Hospitals

XX17.—Jugoslavian Hospitals

THE ISSUE is given over to hospitals.

During the last five-year plan, 13,000 beds, 400 ambulatory polyclinics, 106 dispensaries for children, 93 T.B. dispensaries, 79 dispensaries for women and 57 dispensaries for schools were built. For the next five-year plan, 1961-65, further extension is contemplated by 18,000 beds, 2,500 medical centres with ambulatory polyclinical facilities, 570 general dispensaries, 5 medical institutes, 48 centres for public health, etc.

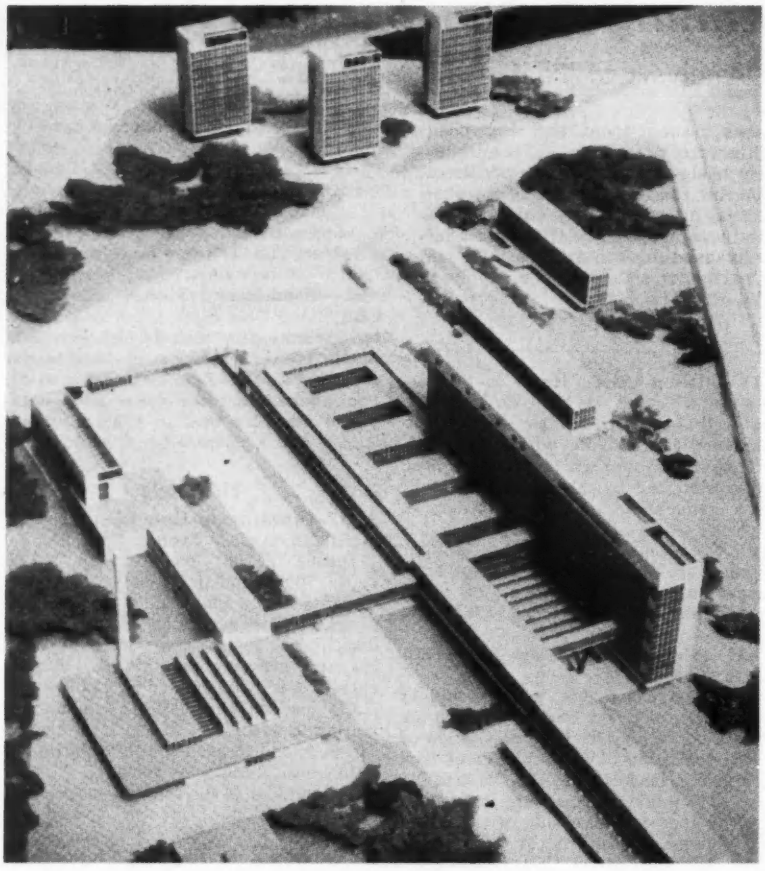
The purpose of the programme is:—

(1) Organisation of preventive medicine centres.
(2) Extension of medical help for patients not in need of hospital treatment.
(3) Organisation of systematic medical survey.
(4) Organisation of X-ray ambulatory units.
(5) Introduction of a card index for statistical purpose.

At present first priority is given to dispensaries for (1) Children, (2) schools, (3) women, (4) dermatology and venereal diseases, and (5) T.B.

The next priority are polyclinics for therapeutic-prophylactic help, also ambulatories for the purpose of investigating: (1) diseases needing immediate hospitalisation; (2) looking after out patients; (3) rehabilitation and occupational therapy; and (4) curative and preventive investigation for cases needing special attention.

Lastly, general and special hospitals are to be built. The issue shows many recent realisations, such as: (1) T.B. institute in Sremskri Kamenici of 700 beds; (2) general hospital in Split of 790 beds; (3) Polyclinic in Ljubljana; (4) hospital for infantile paralysis and bone-tuberculosis; (5) rehabilitation centre; (6) ortho-rhino-laryngological centre for children, nr. Sisk; (7) county hospital near Pristini of 420 beds; (8) hospital in Belgrade of 100 beds; (9) T.B. hospital in Sezani of 167 beds; (10) medical centre in Karlovec (project) of 714 beds; and (11) general hospital in Tuzili of 200 beds for surgery and orthopaedics, 100 beds for gynaecology, 50 beds for ophthalmy, 50 beds



Model of Medical Centre, Karlovec, Jugoslavia (reproduced from 'Architektura Urbanizem,' see Summary XX17)

for nose, throat and ear, 200 beds for internal diseases, 50 beds for dermatology and venereal diseases, 200 beds for children, 50 beds for nervous diseases and 100 beds for contagious diseases. (*'Architektura Urbanizem' (Jugoslavia), No. 8-9, 1961.*)

XX30.—Experimental Hospital for 400 Beds

PLANNED on a basic modular construction of 6m. x 3m. using reinforced concrete blocks with prestressed floor panels of 6m. x 3m. external walls consist of aerated prefabricated cement panels. The main problem was to find the most rational area for a ward. A ward for 5 beds (in an emergency a sixth bed could be incorporated) of 6m. x 6m. was decided on. (*'Architecture in USSR' (Russia), No. 8, 1961.*)

Camping

X21.—Restaurant

BUILT IN SOPOT largely of aluminium of a total area of 2.165m². The snack bar can serve 7,000 meals daily. (*'Architectura' (Poland), Nos. 7-8, 1961.*)

X22.—Camping Sites

BETWEEN 1961-62, 50 new sites will be set up in tourist centres throughout the country. 17 sites with accommodation for 400 guests will be finished by the end of 1961. (*'Architectura' (Poland), Nos. 7-8, 1961.*)

X23.—Park for rest and culture in Silesia, near Katowice

IN SILESIA, near Katowice, is planned a collective effort between social workers, architects and economists to create within the existing 600 hectares park a cultural and rest centre (*'Architectura' (Poland), Nos. 7-8, 1961.*)

Schools

X6.—Skive Training College

RESULT of a competition in 1955. The building is situated on the highest part of a sloping site and is planned along the boundary, thus leaving the plateau free for sports activities. Elongated plan with a central core, comprising the main entrance, gymnasium, assembly hall and lecture hall. (*'Arkitektur' (Denmark), No. 4, 1961.*)

X7.—Egegards School

EXPERIMENTAL SCHOOL BUILDING, based on the principle of pavilion units, each containing two classrooms with its own group annexe. The school is surrounded by low residential buildings. (*'Arkitektur' (Denmark), No. 4, 1961.*)

X19.—North Norwegian Students' home, Oslo

115 SINGLE ROOMS, 14 double rooms with all the necessary amenities for students, such as dining room for 80-100 people, assembly hall, foyer, tuck-shop, etc. (*'Byggekunst' (Norway), No. 5, 1961.*)

X20.—Åkerhus Agricultural school in Nes

ADJOINING the existing school, a new 2-storey extension was built in 1958, planned for laboratories, examination room, offices, library, gymnasium, dining room and kitchen. (*'Byggekunst' (Norway), No. 5, 1961.*)

X27.—Training College, Stockholm, etc.

SPECIAL ISSUE given over to high schools and libraries in various countries: Israel, USA, UK, Sweden and Germany.

Special mention must be made of the Women's Professional Training College in Stockholm, devoted to domestic science. It is a multi-storey building (for reason of restricted building area) comprising:

(1) central domestic science school
(2) central school for textile arts
(3) auditorium with a stage for 350 persons
(4) gymnasium
(5) kindergarten for 60 children
(6) demonstration centre for adults
(7) exhibition room
(8) Guidance centre
(9) dining room/kitchen (2,000 meals daily)
(10) dormitory for 50 girls and quarters for staff, etc. (*'Bauen/Wohnen' (Switzerland), No. 6, 1961.*)

X28.—University Hostels

AN URGENT PROBLEM arises in Zurich and other University towns in Switzerland in respect of housing students. For example, the number of students in Zurich exceeds 7,000 and will probably rise to 10,000, 20 per cent of all students are foreigners. 31 per cent of students live outside the city and the shortage of available accommodation is such that they live in hotels or in tents. Future hostels are planned to accommodate not more than 1,200 residents each, to guarantee the essential minimum of privacy for everyone but at the same time furthering a certain community spirit.

Illustrated is a University building with students' quarters in Geneva. This comprises 3 dormitory pavilions, each providing single rooms, with space for future extensions including a community centre. The issue also contains plans and elevations for a Students' Centre in Berlin (Schlachtensee) and the Marchiondi Spagliardi Institute in Milan-Baggio. (*'Werk' (Switzerland), No. 9, Sept., 1961.*)

XX31.—Experimental schools

THE TENDENCY in USSR is to organise eventually all schools as boarding schools. For every new school, the necessary area is taken into account for future extension. For example, a school for 640 students needs 2.5 hectares. For future boarding schools, for 480 students, between 4.5 and 6 hectares are needed—i.e. 2½ times more than for ordinary schools. (*'Architecture in USSR' (Russia), No. 8, 1961.*)

X Reference
XX Summary
XXX Article

'The Builder' Abstract of European Technical Magazines

Country Periodical Issue	Town Planning	Housing	Churches	Hospitals	Hotels, Camping	Schools, Hostels	Office Buildings	Municipal and Administrative Buildings	Factories	Sport Buildings	Building Construction	Various
AUSTRIA 'Aufbau' June, 1961			X 1									
AUSTRIA 'Der Bau' N34, 1961							X 2					
BELGIUM 'Rythme' N34, 1961		X 3							Pharmaceutical X 4	Golf Club X 5		
DENMARK 'Arkitektur' N4, 1961						X 6 X 7	X 9	Embassy X 8				
FINLAND 'Arkitehti' N3, 1961	XX 10	X 11										
FRANCE 'Architecture d'Aujourd'hui' June, July, 1961			X 12									
FRANCE 'La Construction Moderne' N4, 1961		XX 13										
HOLLAND 'Bouw' September, 1961							X 14					
ITALY 'Architettura' N5, Sept., 1961		X 15	X 16									
JUGOSLAVIA 'Architektura Urbanizem' N8-9, 1961				XX 17								
NORWAY 'Byggekunst' N5, 1961						Students' Home X 19 X 20		Museum X 18				
POLAND 'Architectura' N7-8, 1961					Camping X 21 X 22 X 23							
SWEDEN 'Arkitektur' N8, 1961								Library X 24 X 25 X 26				
SWITZERLAND 'Bauen & Wohnen' N6, 1961						Schools X 27		Library X 27				
SWITZERLAND 'Werk' N9, 1961						Students' Home X 28						
USSR 'Architecture in USSR' N8, 1961	XX 29			XX 30		XX 31						
USSR 'Architecture in Leningrad' N8, 1961											XXX 32	

Office Buildings

X2.—Office Buildings in Austria
THE ISSUE shows several modern office buildings and banks in Vienna, Innsbruck and Steiermark. (*'Der Bau' (Austria), No. 5, 1961.*)

X9.—Underwriters' Office Building, Copenhagen
THIS IS a modern building in the old city. Consideration was taken in regard to the cornice levels of the existing buildings, and narrow window bays were adopted so as to blend unobtrusively with the existing buildings. (*'Arkitektur' (Denmark), No. 4, 1961.*)

X14.—'Shell House' in Rotterdam
THIS IS a 10-storey block, with a roof terrace and 2 pent houses for laboratories. The building is supported on stilts, thus leaving the ground floor open to traffic. 'Curtain wall' elevation. (*'Bouw' (Holland), September, 1961.*)

Municipal and Administrative

X8.—Danish Embassy in Washington
THE BUILDING has two wings, the one housing offices proper, the other the Ambassador's residence and reception rooms. Simple planning. Elevation of a sober expression and classic form. (*'Arkitektur' (Denmark), No. 4, 1961.*)

X18.—Maritime Museum
CONCRETE BUILDING with brick facing; extensive use of copper and teak. A restaurant is planned in the middle of the museum. (*'Byggekunst' (Norway), No. 5, 1961.*)

X24.—Municipal Archives in Stockholm
BUILDING completed in 1959. The administration building is above ground. The rest of the building, for the preservation of records in case of war, was built in 1943; it consists of a seven storeys storage block blasted out of the rock. (*'Arkitektur' (Sweden), No. 8, 1961.*)

X25.—Library in Karlskrona
THE GALLERY principle has been chosen for the design of the lending library, contrary to the latest trend (especially in the USA). The alternative would be to eliminate the boundary between lending and reading rooms, and divide the stock into spheres of interest with reading space in close proximity. (*'Arkitektur' (Sweden), No. 8, 1961.*)

X26.—Library in Östersund
RESULT of an open competition in 1954. Compact planning with an internal courtyard. Library premises situated on two floors (on a sloping site). The public section is on the lower floor, whilst the upper floor contains offices, unpacking rooms and facilities for a travelling library. (*'Arkitektur' (Sweden), No. 8, 1961.*)

Factory

X4.—Pharmaceutical Factory in Bornem.
(*'Rhythme' (Belgium), No. 34, 1961.*)

Sports Building

X5.—Golf Club-house at Waterloo.
(*'Rhythme' (Belgium), No. 34, 1961.*)

Building Construction

XXX32.—Flats Construction using Prefabricated Block-boxes
FLATS assembled from prefabricated block-boxes are now one of the most developed systems of construction in the USSR.

The idea is to build these flats with the maximum comfort for dwellers combined with the most rational exploitation of the habitable area. These block-boxes (dimensions 5m. 60cm. x 2m. 80cm. x 2m. 80cm. high) are factory-produced, brought by trailers to the building site and assembled with the aid of a 5T. moving crane. The block-boxes are fully finished including internal painting, electric and sanitary fittings, etc. Only the assembly, connections for ventilation, heating pipes, drainage, etc., as well as linking of these block-boxes is done on site.

In planning these flats, technological necessities of factory production as well as the most rational and economical standardisation were taken into consideration. Each block has 5 storeys (71m. in height, 11m. 60cm. in length) and is assembled with 250 block-boxes.

Each block contains 66 flats as follows:—

(a) 14 one-room.
(b) 22 two-room.
(c) 20 three-room.
(d) 10 four-room.

Block-boxes consist of five different types.

(1) for stairs—25 per house.
(2) for individual sanitary units—30 per house.
(3) for combined sanitary units—36 per house.
(4) for loggias—60 per house.
(5) for ordinary block-boxes—99 per house.

The height of a block of flats could be increased to 8 floors. There is scope for many permutations, thus giving great variety in town planning.

The majority of rooms are 4m. 30cm. deep (part of the area is taken up by the introduction either of loggias or corridors). The depth of living rooms is less because of built-in cupboards. However the cupboards have sliding doors on both sides for direct communication with the adjoining rooms. Three- or four-room flats have individual sanitary fittings. One- and two-room flats have combined sanitary fittings. The method used for the factory production of block-boxes is by rolling and stamping out, and is calculated for the output of 52 houses per annum, i.e., approximately 100,000 sq metres.

The constructional method does not vary much. The block-box consists of a bearing reinforced concrete frame with reinforced asbestos-cement membranes. The inside walls are of plaster boards. The reinforced asbestos cement membranes are also made by rolling, and are compressed while still in a damp state.

The external wall is 18 cm. thick, consisting of three panels with 'fibrolite' compressed between two cement sheets each 1-2 cm. thick. Because of the economic use of reinforcement as well as of constructional solutions, the weight of the building is considerably reduced, from 350-400 kg. per cu.m. to 100 kg. per cu.m.

The weight of a finished block box of an area of 18 sq. m. equals 5 tons.

The area of a typical block-box is 14.74 sq. m. Piling, site organisation, communications, road building, etc., is organized in connection with the cycle of production. The time taken to assemble two parallel blocks of flats is two weeks. (*'Stroitelstvoi Architektura' (Building and Architecture), Leningrad, USSR. No 8, 1961.*)

Post-Graduate Travelling Scholarships

Overseas Developments in Materials and Equipment

THE BUILDING CENTRE has announced a scheme of post-graduate travelling scholarships. They are for qualified architects, structural engineers, quantity surveyors, builders or others who have been engaged in building for not less than two years or who are teachers of architecture or building, or who are engaged in building research. Two scholarships of £250 each are to be awarded annually to two persons, not necessarily of the same section of the building industry, who undertake to travel abroad together for not less than one month and to study jointly developments in materials and equipment used in building and processes of building in foreign countries.

An unusual feature of the scholarships is that the joint report to be submitted by scholars on their return can be in a form suitable to make a Building Centre recorded technical talk. These talks are on gramophone records, accompanied by a film strip and are made available, without charge, to societies and schools of architecture, surveying and building. Thus the scholars will, in effect, be reporting their findings to large sections of the building industry. It is intended that the conditions of qualification and experience in the scholars shall result in the selection of persons who have the necessary background knowledge to assess the value to British building of the things they have seen.

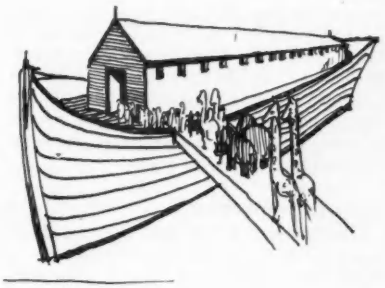
The scholarships will be controlled by a jury of assessors representing all sections of the building industry. They are Mr. Howard V. Lobb, CBE, FRIBA, Mr. G. L. Coates, FRICS, Mr. R. T. James, OBE, MICE, Mr. Norman Longley, CBE, FIOB, and Mr. F. R. Yerbury, OBE, Consultant to the Building Centre. The secretary to the jury will be Mr. E. L. Bird, MBE, MC, ARIBA, technical research and education officer of the Building Centre.

Applications for the 1962 scholarships have to be received before January 1 next. Copies of the conditions of competition and entry forms from the Director, at 26 Store-street, London, WC1.

More Everyday Things

BY ARTHUR W. KENYON, CBE, FRIBA

65. Architectural Models (1)



I SUPPOSE most people, at some time in their lives, have wanted to make a model, and the result has been anything from cathedrals in silver to cottages in matchsticks or seashells. The models which have always intrigued me most have been the ships in bottles: even when I unravelled the secret of how they got into the bottles, my wonder at the craftsman's skill still remained with me.

My second love in models is the doll's house—not the modern sophisticated variety, but the real children's job which little girls have adored for generations past. It is never like any house we have ever known and it has no rules of architecture. It is usually two storeys in height, or the more ambitious ones might be three. The whole of the front opens to reveal a longitudinal section. Everything is out-of-scale, but the child accepts it because it has all the parts it knows in a house, just as when I try to draw a motor car for a child I must show four wheels if I want to have any success.

Scale is an adult concern which the simple wisdom of a child does not need. Perhaps that is why the child intelligence can often come to terms with modern art more readily than the adult with his preconceived notions of scale and perspective. An imaginative child does not ask for one eye on each side of a face: two or even three disposed about the picture as the artist thinks fit are quite acceptable. But to return to dolls' houses, anyone who is interested in them should not fail to see the collection in the Bethnal Green Museum. It is well worth a visit.

The Traditional Noah's Ark

Noah's ark is another wonderful example of make-believe in model form which has captured the child and adult imagination alike. I defy anyone to get away with any modification of this design, and if the delvers and historians should ever discover on Mount Ararat evidence to prove that the traditionally accepted shape is not authentic, they had better keep it quiet.

But when I started to think about models it was not, of course, Noah's arks and dolls' houses that I had in mind, but our modern true-to-scale facsimile models of buildings to be.

This is no new trade: there have always been professional model-makers of high skill and craftsmanship whom architects have resorted to for special projects. But for his everyday buildings the architect used to take his own amateur efforts to his client: these were not entirely unskilled and they served their purpose well in illustrating to both his client and himself what his building would look like in bricks and mortar or solid stone.

Today the amateur model-maker who becomes proficient turns professional, as is the modern way, whether it be craftsmanship or sport, and some very splendid work he does.

From Noah's arks to modern architectural models is quite a step, and I fear I have already reached the end of my column, but not the end of my thoughts on this subject.

Whither the RIBA?

Some Personal Views of Mr. Gordon Ricketts

During the summer Mr. Gordon Ricketts, MA, addressed the Royal Incorporation of Architects in Scotland in Aberdeen on some aspects of the work of the Royal Institute of British Architects. Extracts which now follow are given by permission of the Royal Incorporation. It should be noted that Mr. Ricketts was speaking in a personal capacity and was not necessarily reflecting the views of the RIBA Council. In his talk he made no reference to architectural education as he had recently spoken to the Edinburgh Architectural Association on this subject.

IF YOU TALK about the RIBA and its work, the range of possible subject matter is nowadays pretty wide; so I thought I would limit myself to picking out one or two activities which, to my mind, typify and symbolise the aims and the programme we seem to be carving out for ourselves for the next ten years.

I'm not going to talk about those domestic issues that have, in fact, been occupying a good deal of our time in the last year or two—the acquisition, for instance, of some specialist staff (we now have an economist, a barrister, a high-grade Press man, and a couple of architects) or the efforts to streamline the internal economy as to finances and organisation and office methods and committees and thus to stave off a bit longer the day when the curve of expenditure overtakes the curve of income and we come back to you with specious-sounding arguments for higher subscriptions. Nor do I want to dwell on items like the re-appraisal of the Competitions system, where some tinkering is going on to bring it into line with modern conditions; or the measures to improve liaison between the RIBA and Allied Societies; or, for instance, the changes proposed in the pattern of the British Architects' Conference, because, important though these things are, they are really part of the periodical and relatively short-term spring-cleaning which any organisation finds necessary now and again. Finally, I am dismissing, too, the overhaul of the constitution of the Council and the ripples that flow from that, because I feel that Hilaire Belloc said the last word on this sort of thing when he wrote:

" And then the accursed power which stands
on Privilege
(And goes with women and champagne and
Bridge)
Broke—and Democracy resumed her reign
(Which goes with Bridge and women and
champagne).

I suppose if you were asked to oversimplify the main aim of the RIBA between the wars, you might come up with the one word 'registration.' Today, there is a complex of aims for the next decade, but in sum they amount to one overall purpose which, I would say, is simply to establish the architect's authority—to re-establish his impaired authority or consolidate and extend the authority he has, according to your point of view.

The New Patrons

One aspect of this task is to identify the new patrons of today and tomorrow, first to attract their interest and then as necessary to lead them to understand how best to use the profession. There are some mature ones, like building societies or senior civil servants, who ought not, in theory, to need more than an occasional reminder; but relatively new patrons *on a big scale*, like local authorities, may need more fundamental treatment. Our first essay in going out after them in this rather more positive way was, you remember, the recent 'Competition by Tender' statement which aimed to help them see the right procedures to adopt to ensure decent standards of urban redevelopment—a document, incidentally, we are now revising substantially in collaboration with the RICS. I should expect this sectional approach to society—the attempt to identify and isolate a category of client and tailor-make our approach to meet his particular problem—to develop in the RIBA. It is true that, in a Welfare State approaching classlessness, and now of some affluence, everybody is a potential client and therefore worth courting, via modern media like TV. But there still are, and are likely to remain, pockets of power which have their corporate expression in the Federation of British Industries, Institute of Directors, Chartered Accountants, not to speak of developers and financiers, who, traditionally, may sound like improbable bedfellows for the RIBA but whom in the 1960s, I suggest, we ignore at our peril. At any rate, I

personally am inclined to rejoice more over the one invitation to the PRIBA to lunch from the Chairman of the Stock Exchange, the Director of the Bank of England, or the Managing Director of Shell, than over the ninety and nine from fervent, admirable but necessarily rather toothless amenity societies.

Registration Matters

This hunt for the right patronage we are beginning to extend to Members of Parliament, partly because of their presumed influence, partly because we may well want to promote legislation to bolster the architect's authority. It is now twenty-three years since the last Registration Acts, and members naturally look longingly at the dream of legislation to protect function as well as title. To achieve that, we should need to persuade the House that the present situation is positively harmful to the public interest and produces what the lawyers call a 'mischief'; and as amenity could be said to be safeguarded by the Town and Country Planning Acts, and safety by a labyrinth of by-laws and building regulations, this wouldn't be easy; for, apart from those, what excuses have you left for advocating an absolute monopoly? So we may have to be content with tidying up abuses like the use of 'architectural consultant,' 'architectural designer'; and Section 17, which allows any practice to call itself a firm of architects as long as *one* of the partners is an architect—even though the rest may be butchers and bakers and candlestick makers.

All this would be useful; but more profitable, perhaps—and this could be a ten-year stint—would be legislation, first to bring all building by-laws of a technical kind under central regulations, something after the Scottish pattern which we Sassenachs envy, and then, if I may give a wholly unofficial and personal view, to see if we can get it agreed that architects, as highly qualified professional people, are exempt or at any rate can certify their own compliance with regulations 'vis-à-vis' their own buildings. The principle would be that it's their job to know them (once they are in a manageable form to know), to observe them and interpret them intelligently, and be jumped on if they don't. Nothing breeds authority like genuine and total responsibility, and in this context the familiar analogy with medicine seems valid enough. No GP has to run to the local MoH to ask if he may prescribe this or that drug. It is assumed that his capacity to do so with safety and skill is one of the things all that long and expensive training was about. Similarly, for us to have a long and expensive training only to be subject to inspectors of manifestly inferior qualifications to see that we observe elementary rules of ventilation or sanitation or safety is, one would think, damaging to our authority and wasteful of the country's resources in manpower and money.

Establishing a Grip on Design

This brings me to an altogether filmier area of speculation, where the crystal ball is much less responsive. I believe the RIBA has to find ways of helping the profession to take a firm and comprehensive grip on the design side of the building industry, which tends to become increasingly diffused. At present you not only have fragmentation at the edges of the profession itself in landscape architecture (which as fragmentation is hardly important), and Town Planning (which is); but there are shopfitters and interior designers, and the Structurals out on a limb as a separate Institution; there are the worlds of heating, ventilating and electrical services in which someone clearly has to persuade the best electrical and mechanical engineers that the building industry is not a poor relation you may, alas, have to fall back on if you can't get into ICI or Vickers or BTH; and lower down the scale, but still directly within the architect's purview as client's agent, are auxiliaries such as the building surveyor and the clerk of works. It is not, I think, putting it too strongly to say that the clerks of works are crying out for sponsorship from us—some strong sponsor to promote systematic training, define the clerk of works' responsibilities, and put him as firmly on his feet as the contractors ought to be doing with the general foreman and site manager.

Need for Co-ordination

I am not suggesting the RIBA should make a take-over bid for all or any of these bodies. I am suggesting that there is a major job of co-ordination and leadership to be done here which is almost enough in itself to fill ten years.

Nor do I think we can stop there, for there remains the design of building components. I realise that there have been several false dawns of the prefabrication, dry construction age, and I am among the least qualified to know when and how gradually during our working lives the break-through will come; but it strikes me as the kind of development which, given a long stretch of prosperity, a continued shortage of manpower and rising labour costs, could happen rapidly enough to make us realise afterwards that we were unprepared—that we had for too long been accepting what leading manufacturers of equipment, or more important, their inferiors, had prescribed, for us to be able to influence their design at all readily; that in fact instead of exploiting new techniques and materials we were in danger of being exploited by them.

Interest in the Contracting Side

Whether we should attempt to extend this avuncular authority to taking much of a hand on the contracting side over the next decade, I am much less sure. We might remove the anomaly by which an architect can be an employee of a building company but is at once guilty of unprofessional conduct if he is successful enough to become a director. But this would cause no landslide, or create new patterns overnight. While I am with Peter Trench in thinking that fifty years hence design and construction will be much more nearly under one roof because the logic of that arrangement is inexorable, I should have thought that, for the moment, having as independent practitioners established our authority with the builder, we should be content to see that conditions are right for the architect to design and the builder to build.

That there should be any question about the architect's authority with the builder is, I take it, of fairly recent date—whether because of the war, a spell of Labour Government, the 1944 Education Act with its equality of opportunity, our own neglect or simply the impertinence of inferiors to their betters that is characteristic of a graceless age, I leave you to tell me. Yet one should take note of it, because there is almost no President of any builders' federation who, having used honeyed words to you, if he knows you, and certainly to us across an RIBA lunch table, does not then regard it as his birthright to lard his public speeches with indictments of the architectural profession whose notorious incompetence robs the honest builder of his meagre profit. The builder readily acknowledges—does he not?— that the architect is a chap who has certainly got something, but is less gruntled when that something appears to be costing him money. There are one or two awkward facts in support of his disgruntlement. It is widely said—and I have never heard it refuted—that all builders add anything from ten to twenty-five per cent to their tenders according to their assessment of the shortcoming of the architect concerned. If you reckon that we handle £800m. of the £1,200m. of new building work done annually, and take 10 per cent or so of that, you are not far short of £80m. p.a. If, say, the Treasury, on the hunt for more economical tendering systems, were to take too much note of that sum, they could start looking for savings in ways we might regret.

Meaningful Practical Training

At any rate I believe we have to silence these moans by the builders and it should not take more than a couple of moves to do it—and certainly not ten years. One move is to codify and systematise, and then promulgate as constituting good practice, all those office procedures and communication systems and rules of project management that the young architect has at present to pick up by the light of nature or the happy chance of being trained in the right office; and that is why we are pushing ahead as fast as we can at the RIBA with the Management Handbook, something on the lines of the American one. The other measure is to overhaul radically the present compulsory period of practical training for the emerging architect. This I believe to be, at its worst, a worthless piece of time-serving. To list a few things it would be nice if the trainee were to cover but not to insist that he does them or to care where he does them, or how thoroughly, or who signs the Certificate to say he has done them is—to choose one's words with moderation—carrying the RIBA's liberal traditions rather far.

It is a mistakenly liberal attitude also, I

think, that is at the root of my last example which is the RIBA's authority with its own members in matters of professional conduct. A Code of Conduct may cover ten lines or ten pages but unless it is administered with a degree of autocracy, any man intent upon it can drive a horse and cart through the lot, supplanting his fellows, letting his client down and scamping his design. There therefore seems a strong case for having a short code of the greatest simplicity but rigidly enforced rather than to attempt, and necessarily fail, to proscribe in an elaborate and detailed Code all those activities that could be prejudicial to good architecture.

But my point is that, long or short, a Code on paper is no better than its administration in practice, and frankly I don't think we are tough enough—not so much over those clauses which make for respectability and decorum such as not having lettering more than 2 in., as in those manifest failures in terms of professional competence that are what really damage a profession's reputation with the lay public. To be specific, I'm thinking of the chap who, to cite one case, is commissioned to design a bungalow for a maiden lady for £1,250, knowing this is literally her last available pound; who through apparently inexcusable delays takes eighteen months to produce anything; shows ignorance of elementary planning and by-law requirements; and finally lands her for a bill for £3,500 and literal bankruptcy. We have a blanket, omnibus clause in our by-laws which allows the Council to suspend, reprimand or expel for conduct unbecoming to the profession of architect, and I believe that, in these few glaring cases, we should have no hesitation at all, after fairly hearing the evidence 'pro and con,' in throwing him out. To do less is, in my view, to be unfair to the great majority of admirable members who do a sound and conscientious job but who inevitably share directly in the opprobrium if the blatant offender is seen to get away with this kind of thing.

National Joint CC

Committee Set Up to Consider Joint Training

THE FIRST MEETING of the 1961-62 session of the National Joint Consultative Committee of Architects, Quantity Surveyors and Builders took place at the RIBA on October 16. In accordance with the provisions of the new constitution the officers for the 1961-62 session were elected. Mr. Cyril Sweett, FRICS, senior partner of Cyril Sweett & Partners, quantity surveyors, was elected chairman of the NJCC for 1961-62 and Sir William Holford, President of the RIBA, was elected vice-chairman. Mr. G. W. Grosvenor, CBE, who retired from the chair, has been chairman of the Council since its inception in 1954; he remains as one of the officers of the committee in his capacity of immediate past chairman. At a sherry party after the meeting members of the Committee paid tribute to Mr. Grosvenor's invaluable services as chairman over the past seven years and presented him with a wrist watch.

Among new members welcomed to the Committee were Mr. E. C. Strathon, President RICS, Mr. Alick Low, FRIBA, Mr. W. D. Lacey, ARIBA, Mr. R. T. Walters, ARIBA, and Mr. Michael Simpson, ARIBA, Chairman of the Junior Liaison Committee, which will henceforth be represented by an observer at the Committee.

Joint Training

It was announced at the meeting that a committee to consider ways in which joint training and education for the professional and contracting sides of the building industry could be developed had been established at the instance of the NJCC. Sir Noel Hall, now Principal of Brasenose College, Oxford, and formerly Principal of the Administrative Staff College, Henley, has agreed to act as independent chairman of the committee. The RIBA Board of Architectural Education, the Board of Building Education, the Royal Institution of Chartered Surveyors and the Institution of Structural Engineers have nominated representatives to the Committee as follows:

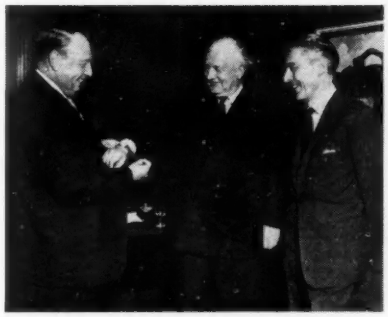
RIBA Board of Architectural Education: Edward D. Mills, William Allen and Professor Denis Harper.

Board of Building Education: H. S. Oddie, P. M. Shepherd and Professor A. W. Hendry.

RICS: W. James and A. J. Culley.

Institution of Structural Engineers: L. E. Kent, D. T. Williams.

It is expected that the Committee will begin its work early in the New Year. It will report direct to the four constituent bodies and keep the NJCC informed of its progress.



Mr. Cyril Sweett presenting a wristwatch to Mr. George Grosvenor, retiring chairman. To right is Sir William Holford, vice-chairman

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Architect's Estate

MR. DAVID BARNES JENKINSON, FRIBA, of David B. Jenkinson and Son, F/ARIBA, of Rotherham, former president of the Sheffield and South Yorkshire Society of Architects and Surveyors, who died on April 1, left £17,172 (£16,064 net).

Civic Centre, Woking

Architect Tells Traders His Plan

SO THAT local traders and businessmen could hear all about the proposed new £740,000 civic buildings, Woking (Surrey) Chamber of Trade invited Mr. D. H. McMorran, ARA, FSA, FRIBA, to address their luncheon meeting on October 18. The meeting was presided over by Lord Swaythling (president).

'I have been told by laymen,' said MR. MCMORRAN, 'that my buildings look like Tibetan monasteries, Lancashire cotton mills, London dock houses, early Victorian workhouses and Moorish castles. That sort of thing does not surprise or displease me. Many of those buildings are among the most pleasant in the world, buildings of quality, simple, well-proportioned, dignified, so I am not too disappointed.'

The Council, he said, required offices, a council suite, with council chamber and committee rooms, a public hall of 1,000 seats for general purposes and a smaller hall which might have stepped seating like a theatre. In addition, there was a proposal to include magistrates' courts. The site was roughly divided into three—the buildings, amenity spaces and car parks. They were proposing nothing more than three-storeys with brick, load-bearing walls carrying reinforced concrete floors. The simple, trussed roof would be covered with copper.

This, he thought, would give the buildings a good sound appearance and low maintenance. They were anxious that the buildings should not look shabby in a few years as a good many modern buildings with the slick finishes of today did. Replying to a question, Mr. McMorran agreed it would be a good thing if they were to use local materials from local suppliers. The lighter coloured brick was favoured, but if a Surrey yard could produce the necessary output to keep the job going, red or multi-coloured brick could be used. Mr. McMorran commented that it was encouraging to an architect to know in a scheme of that sort there was a community interest and concern.

Building in the City

New Offices Approved

WITHOUT COMMENT, the Court of Common Council, on October 19, sanctioned a further stage in the proposed erection of two more office buildings in the City of London, each with a basement car park.

In compliance with development permission granted on December 3, 1959, the court approved the drawings for a 15-storey office building at 19 to 30 and part of 32 Fetter-lane, parts of 4, 5 and 6 West Harding-street, parts of 1, 3, 5 and 7 Great New-street, and 1, 2 and 3 West Harding-street.

Similar approval was given for a nine-storey building, with offices above ground-floor shops, at 167 to 170 Fleet-street, 2 and 3 Red Lion-court and 2 Johnson's-court. Development permission was granted on June 16, 1960.

Collapse of Crane on Building Site

Jury's Finding on Cause of Fatal Accident

A SHEAVE put in upside down during the erection of a crane caused the death of a 27-year-old crane driver, a coroner's jury decided on October 18.

They returned a verdict of accidental death at the St. Pancras inquest on Patrick Shanahan, of Mornington-terrace, St. Pancras, NW1, who died when the crane crashed at the Museum Telephone Exchange building site in Howland-street, W1, on September 19. Four other men were injured.

The Coroner: MR. R. IAN MILNE, said the erection 'went wrong' because the sheave was put in upside down.

MR. ALFRED KRAUSSE, technical manager of Liebherr (Ireland) Ltd., said his company made the crane and were erecting it. It had been made and tested in Ireland.

After explaining how the crane put up its tower in sections, Mr. Krausse was asked by THE CORONER: 'If you perceive that the pulley is in wrong and you hoist the platform nearly to the top, can you put a great strain on the rope?'—'Yes, the rope can be cut and the platform will crash down'.

MR KRAUSSE said there was room for five men on the platform.

CORONER: 'If the platform started to drop somebody, not knowing the crane, might seize a lever for support?'—'Yes.'

MR. KRAUSSE said he inspected the crane after it had crashed.

CORONER: 'Can you say whether that sheave had been put in wrongly and so caused calamity?'—'That was found.'

'And the wire had been cut because of this?'—'Yes, that is the climbing rope.'

'Why did the safety precautions not stop the drop?'—'I take it that one of the fitters who was on the crane must have been holding the lever, and when the platform started to fall he did not let it go, and therefore the lugs could not come in.'

'Must the lever be held while the platform is climbing?'—'No, it does not have to be held.'

Position of the Sheave

After saying that he had found no other defects in the crane, Mr. Krausse was asked: 'So it happened because the sheave was put in upside down?'—'Yes, because the sheave was underneath. It crashed together with the platform.'

MR. DONAL NEALE MCNALLY, chartered civil engineer, of New End, Hampstead, said he saw the lift stop a few inches from the top of the tower and then start to move again. 'I don't believe it went to the full height and then started to fall. I saw someone fall from approximately the top of the tower to the ground.'

The mechanical plant foreman on the site, MR. AUSTIN CANNEY, of Alcombe Park, NW2, said he queried the angle of the sheave with Mr. Patrick Kelleher, who was in charge of the erection, and was told there was no danger. It was a smooth lift at first. I thought it was at the top and then all I heard was a tearing noise as if the rope was going. The next thing I knew was that we were at the bottom.'

When Mr. Kelleher, of Borrowdale, Robert-street, NW1, went into the witness box, Mr. Patrick Bennett, representing Liebherr (Ireland) Ltd., advised him not to answer any questions on the grounds that he might incriminate himself.

Mr. Bennett told the Coroner that action had been taken to prevent the recurrence of a similar mishap.

The Coroner's Findings

THE CORONER said that the jury were inquiring into the cause of Shanahan's death and not who was to blame for it. Shanahan fell when the erection of the crane went wrong. 'I think you will be satisfied that it went wrong because the sheave was put in upside down,' said the Coroner.

'Instead of locking itself firmly at the top, the crane came almost to the top and then proceeded to cut its own climbing rope to pieces.'

Kelleher was responsible for the overseeing of the climbing rope. It appeared to have been the duty of one named man to do this job correctly. 'It has not been done correctly,' the Coroner added.

'It is often said in court that when you indulge in wilful or reckless conduct it is unlikely that you will place yourself in a position of harming yourself in that conduct if you can help it—Mr. Kelleher was at least prepared to trust his own life to it.'

Land and Site Sales

'Demand for Flats as Keen as Ever'

FROM A PROPERTY CORRESPONDENT

MESSRS. SITEFINDERS LTD. report the sale of a site in Victoria-drive, on the borders of Wimbledon and Putney, with planning permission for the erection of 21 flats, at a price substantially in excess of £1,000 per unit. Sitefinders Ltd. comment that the demand for flat sites in good positions appears to be as keen as ever in view of the fact that contracts were exchanged only 17 days after the date of their original instructions to offer the site for sale.

Two sites, approx. 340 sq. ft. and 300 sq. ft., in Alphamstone-road, Lamarsh, Essex, were sold by Percival & Co., of Sudbury, for £490 and £370; while a ½-acre site in Over-road, Almondsbury, Glos., fetched £1,600, and another building site of ¼ acre, with cottage, in the same locality, brought £1,725, at Victor Osmond & Co.'s auction in Bristol.

The London-road, Sandy, Beds., 6¾-acre site was sold by F. W. Western & Co. for £14,000; and in Monmouthshire, the Nursery Garage, Brecon-road, Abergavenny, with planning permission for redevelopment, a site of 800 sq. yd., was sold by Eric Thomas & Harper for £7,450.

A sale of building plots with planning permission in Main-street, Plumbtree, Notts., included 3,182 sq. yd., £1,600; two plots of 2,175 and 1,206 sq. yd., £750 and £800: auctioneers, Turner Fletcher & Essex, of Nottingham.

At Ellesmere Port, Cheshire, the 11,400 sq. yd. building land on Chester/Warrington roads, with residential planning permission, was sold by Boult Son & Marples, for £5,000.

The sale of parts of the Thundersley Park, Thundersley Hills, and Thundersley Manor estates, by John S. Lloyd & Co., at Southend, resulted in the Central-ave., Hadley, site of 180 ft. frontage fetching £2,800; plots in Church- and London-roads, of 80 to 265 ft., realising £50 to £70 a site; and six other sites from £25 to £100 apiece. In Warwickshire, Mr. Eric J. Dudley has sold 4 acres with residential planning permission in Woldslane, Wolvey, for £4,600. At Cullompton, Devon, Strutt & Parker sold two sites with planning permission for one house on each, at £485 and £480.

Effects of High Mortgage Rates

There have been various forecasts of a further increase in mortgage interest rates, and, if fulfilled, this may add to the difficulties now being experienced by some developers in selling new houses and maisonettes, since prospective buyers must now not only find larger deposits but, as interest rates and consequently mortgage repayments increase, show larger incomes to satisfy the usual four-to-one ratio of income to repayments required by most building societies.

Properties in a large new estate at St. Mary Cray are now being let at rentals equivalent to what the mortgage repayments would have equalled, owing to the difficulties experienced by prospective occupiers in obtaining loans; while one of the big house and maisonette building firms reports that a considerable proportion of site bookings are being cancelled for the same reason, though so far sales proceeding on mortgages arranged exceed withdrawals. It is now quite common for the intending purchasers of a new property to contact half a dozen building societies before finding one prepared to advance for completion of the mortgage two, three or four months ahead; and it is an open question whether this shortage of mortgage funds is likely to be rectified by even a further increase of ½ per cent on the interest rate offered to investors.

Firm Prices for Materials and Services

First List of Manufacturers Willing to Quote Over a Period

Printed below is the first list of specialists and manufacturers who have responded to the challenge given by Mr. Peter Trench, Director of the National Federation, to quote firm prices for a period of up to 24 months from date of offer. Other lists will be published as firms respond. In his letter (see 'The Builder' of October 13, p. 667), Mr. Trench offered to circulate the names of such firms to his 16,000 members, should response be favourable. Firms prepared to quote should write to the Editor of 'The Builder,' 4 Catherine-street, Aldwych, WC2, giving the name of their products and the period over which they are prepared to hold quotations.

Bricks and Tiles

IBSTOCK BRICK & TILE CO. LTD., Ibstock, Leicester.
PERIOD: Minimum of 12 months.
PRODUCT: Bricks and tiles.

Concrete, Reinforced Concrete

BUCKINGHAM RENDER CONCRETE CO. LTD., Buckingham Chambers, Vivian-avenue, Hendon, NW4.
PERIOD: 3 months.
PRODUCT: Ready-mixed concrete.

CONCRETE LTD., Green Lane, Hounslow, Middx.
PERIOD: Up to 24 months.
PRODUCT: Reinforced concrete design and supply of 'Bison' rc and pre-stressed elements.
COMMENT: 'Ability to quote is nevertheless made extremely difficult because of our inability to obtain firm prices for our raw materials, also by lack of pre-planning which, although it is supposed to be a pre-requisite of firm-price tendering, does not in our experience operate as it is obviously intended to do.'

KLEINE REINFORCED CONCRETE LTD., 9-13 George - street, Manchester - square, London, W1.
PERIOD: 12 months.
PRODUCT: Design and construction of RC framework, structural floors and roofs.
COMMENT: Firm prices for sub-contract work will be quoted where the information available allows us to do so and gives some assurance of pre-planning having been carried out in accordance with MoW recommendations. The company has subscribed to this policy for some considerable time, though it is still handling inquiries where the fluctuation clause applies.

QUICKSET WATER SEALERS LTD., 20 Albert Embankment, SE1.
PERIOD: 24 months.
PRODUCT: 'Setcrete,' 'Flocrete' and 'Betonac' sealers.

TRUSCON LTD., 35-41 Lower Marsh, SE1.
PERIOD: 24 months.
PRODUCT: Offer covers the following products and/or services: (1) In relation to foundations and reinforced concrete structures: (a) design and supply of steel reinforcement; (b) design and supply of steel reinforcement plus construction; (c) construction only. (2) In relation to a wide range of precast concrete products including the 'Truscon' precast floor and roof unit: (a) design and supply only; (b) design and supply plus fixing. (3) In relation to 'Hy-Rib' ribbed expanded metal centering and lathing: (a) design and supply; (b) supply only.

WARECRETE PRODUCTS, Crane Mead Works, London-road, Ware, Herts.
PERIOD: 3 months.
PRODUCT: All types of concrete units (except prestressed) to BSS and customers' specifications, concrete and clinker blocks and truck-mixed concrete.

Engineering Fabrications

B.E.F. (ENGINEERS) LTD., Platt-street, Bolton, Lancs.
PERIOD: Up to 24 months.
PRODUCT: Light engineering fabrications, stagings, gangways, walkways, stairs and a variety of racking and materials handling equipment.

Glazing

H. BROWN (GLAZING CONTRACTORS) LTD., 139 Greyhound-road, Tottenham, N17.
PERIOD: 6 months.
PRODUCT: Glazing and leaded lights.

Joinery

JOHN DIGHT LTD., 523-530 Brixton Station-road, Barrington-road, Brixton, SW9.
PERIOD: 21 months.
PRODUCT: Kitchen fitments and light joinery.
COMMENT: Happy to quote firm prices for kitchen equipment for 18 months, subject to estimate being accepted within 3 months. This brings firm price commitment to total of 21 months when full advantage is taken of acceptance period.

Structural Engineers

LINDSAY'S PADDINGTON IRON WORKS (1948) LTD., North Wharf-road, Paddington, W2.
PERIOD: 12 months.
PRODUCT: Structural steelwork.

Thermoplastics

MODERN FITTINGS LTD., 4 & 6 Dunster-street, Northampton.
PERIOD: Up to 24 months.
PRODUCT: Fabrications and mouldings of thermoplastics, particularly Perspex, including dome lights, sheet and cut sizes.

Windows and Curtain Walling

FENESTRATION LTD., 12 Museum-place, Cardiff, and 17 Platt-street, Bolton, Lancs.
PERIOD: Up to 24 months.
PRODUCT: Windows, curtain walls and architectural joinery.
COMMENT: 'We are always prepared to guarantee firm prices for periods of at least 12 months and in many cases, subject to negotiation, up to two years.'

WILLIAMS & WATSON, LTD., Regent Works, Bootle, Liverpool.
PERIOD: Up to 24 months.
PRODUCT: Metal windows.

MoW Winter Lectures

Programme for November

THE NOVEMBER PROGRAMME of Ministry of Works lectures on subjects of interest to the building industry is as follows:

Aberdeen.—November 1: 'Modern Painting and Decorating,' by J. W. Wilson, at the Robert Gordons College. 7.15 p.m.

Leamington.—November 1: 'Thermal Insulation of Buildings,' by A. A. Clark, at Mid-Warwickshire College of Further Education, Warwick New-rd. 7.15 p.m.

Preston.—November 1: 'Essentials of Good Concreting,' by E. E. H. Bate, at Harris College, Corporation-st. 7.15 p.m.

Willesden.—November 1: 'Practical Aspects of Site Investigation,' by S. J. Button, at Willesden Technical College, Department of Building, Denzil-rd, NW10. 7.15 p.m.

Worthing.—November 1: 'Prevention of Accidents in the Building Industry,' by J. A. Hayward, at the Court Room, Town Hall. 7.15 p.m.

Halifax.—November 2: 'Problems of Plumbing in Multi-storey Buildings,' by W. J. Woolgar, at Percival Whitley College of Further Education, Hopwood-la. 7.15 p.m.

Leicester.—November 2: 'Oil-fired Domestic Heating Installations,' by J. W. Musgrave, at the School of Building, Newark-st. 7.15 p.m.

Llandrindod Wells.—November 2: Film Show: 'Building and Civil Engineering Subjects,' at the Park Royal Hotel, 7 p.m.

Stirling.—November 2: 'Modern Painting and Decorating,' by J. W. Wilson, at the Golden Lion Hotel. 7.15 p.m.

Wigan.—November 6: 'Glass—The New Age Builders' Material,' by A. H. MacKinnon, at the Mining and Technical College, Library-st. 7.30 p.m.

Falkirk.—November 7: 'Corrosion of Metals in Building,' by R. D. J. Tarleton, at the Gas Board Showrooms, 171 High-st. 7.15 p.m.

Birkenhead.—November 8: 'Defects in Brickwork,' by J. O. May, at the Technical College, Borough-rd. 7.15 p.m.

Bromley.—November 8: 'Structural Uses of Timber,' by H. Richardson, at Bromley College of Art, Department of Building, Wharton-rd. 7.15 p.m.

Kilmarnock.—November 8: 'Corrosion of Metals in Buildings,' by R. D. J. Tarleton, at Lauders Restaurant, 7.15 p.m.

Chester.—November 9.—'Modern Timber Construction,' by Howard Wilkinson, at the College of Further Education, Eaton-rd., Handbridge. 7.15 p.m.

Huddersfield.—November 9: 'Oil-fired Domestic Heating Installations,' by J. W. Musgrave, at the College of Technology. 7.15 p.m.

Ipswich.—November 9: 'Recent Developments in Concrete,' by M. S. Thompson, at the Ipswich Civic College, School of Building, Rope Walk. 7.15 p.m.

York.—November 9: 'Prevention of Accidents in the Building Industry,' by J. A. Hayward, at the Technical College, Dringhouses. 7.15 p.m.

Bradford.—November 14: Film Show: 'Building Techniques and Problems.' at the Institute of Technology, Great Horton-rd. 7.15 p.m.

Crawley.—November 14: 'Essentials of Good Concreting,' by E. E. H. Bate, at Crawley College of Further Education, College-rd. 7.15 p.m.

Kirkcaldy.—November 14: 'Developments

in Paint and Painting,' by W. H. Jackson, at the Museum Lecture Hall. 7.15 p.m.

London.—November 14: 'Present Day Trends in Heating and Ventilation of Buildings,' by J. R. Kell, at Incorporated Society of Auctioneers and Landed Property Agents Headquarters, 34 Queens Gate, SW7. 7 p.m.

Barnsley.—November 15: 'Legal Aspects of Building Contracts,' by A. J. Butcher, at the College of Technology, Church-st. 7.15 p.m.

Hastings.—November 15: 'Dry-Rot—Causes, Remedy and Prevention,' by B. W. Eades, at Hastings College of Further Education, Archery Road, St. Leonards-on-Sea. 7.15 p.m.

Perth.—November 15: 'Developments in Paint and Painting,' by W. M. Jackson, at the Salutation Hotel. 7.15 p.m.

Stoke-on-Trent.—November 15: 'The RIBA Form of Contract,' by I. N. D. Wallace, at the College of Building, Cauldon-pl., Shelton. 7.15 p.m.

Bolton.—November 16: 'Prevention of Accidents in the Building Industry,' by J. A. Hayward, at the Technical College. 7.15 p.m.

Swansea.—November 16: Film show, 'Building and Civil Engineering,' at the Ballroom, the Dragon Hotel. 7.30 p.m.

Portsmouth.—November 20: 'New Techniques in Building,' by D. Bishop, at Highbury Technical College, Anglesea-rd. 7.15 p.m.

Leeds.—November 21: 'Oil-fired Domestic Heating Installations,' by J. W. Musgrave, at the Guildford Hotel, The Headrow. 7.15 p.m.

Connahs Quay.—November 21: 'Prevention of Accidents in the Building Industry,' by J. A. Hayward, at the Technical College. 7 p.m.

Southampton.—November 21: 'Fire Resistance of Concrete Structures,' by M. R. Hollington, at the Technical College, St. Mary-st. 7.15 p.m.

Doncaster.—November 22: 'Work Study Aids Builders,' by B. D. Wakeford, at the Technical College, Waterdale. 7.15 p.m.

Hereford.—November 22: 'Modern Painting and Decorating,' by J. W. Wilson, at the Herefordshire Technical College, Aylestone Hall. 7.15 p.m.

Newport, IOW.—November 22: 'Dry Rot—Causes, Remedy and Prevention,' by B. W. Eades, at the Isle of Wight Technical College, Hunnyhill. 7 p.m.

Wrexham.—November 22: 'Prevention of Accidents in the Building Industry,' by J. A. Hayward, at the Technical College. 7 p.m.

Birmingham.—November 23: 'Thermal Insulation of Buildings,' by W. S. Brydon, at Ministry of Works Lecture Theatre, Five Ways House, Islington Row. 7.15 p.m.

Rhyl.—November 23: 'Prevention of Accidents in the Building Industry,' by J. A. Hayward, at the Westminster Hotel. 7.15 p.m.

St. Albans.—November 23: 'Combination of Natural and Artificial Lighting in Buildings,' by A. D. Charters, at the Hertfordshire College of Building, Hatfield. 7.15 p.m.

Wakefield.—November 23: 'Work Study Aids Builders,' by B. D. Wakeford, at the Technical and Art College, Thornes Park, Horbury-rd. 7.15 p.m.

High Wycombe.—November 27: 'Essentials of Good Concreting,' by E. E. H. Bate, at the College of Further Education. 7.15 p.m.

London.—November 28: Discussion—'Design for Mechanisation,' by G. Grenfell Baines, Norman Wates, Bruce Martin, E. J. Cook, in Conference Room, Olympia. 5 p.m.

Bishop Auckland.—November 29: Film show—'Building Problems and Techniques,' at the Technical College, Woodhouse-la. 7.15 p.m.

Bognor Regis.—November 29: 'Work Study in the Building Industry,' by K. C. M. Symons, at the Technical Institute, Southway, 7.15 p.m.

Willesden.—November 29: 'RIBA Form of Contract,' by I. N. D. Wallace, at the Technical College, Department of Building, Denzil-rd. 7.15 p.m.

Chatham.—November 30: 'Small Pipe Central Heating,' by W. A. Hamblen, at the Sun Hotel, High-st. 7.15 p.m.

Newcastle-upon-Tyne. — November 30: 'Good Concrete from Local Aggregates,' by R. Cameron, the Y.M.C.A., Connaught Hall, Blackett-st. 7.15 p.m.

Law Report

Damages for Injuries to Workman : Award Set Aside by High Court

W. & C. French Ltd. v. Langan

THE COURT OF APPEAL on October 19 allowed an appeal by W. & C. French Ltd., contractors, of Epping New-road, Buckhurst Hill, Essex, from a decision of Mr. Justice Paull in the Queen's Bench Division on February 16, 1961, awarding an employee, Mr. Patrick Langan, 28, labourer, of Warwick-road, London, SW, £1,180 damages for injuries suffered in a boiler pipe accident. The award was set aside.

The trial judge had held that the employers were equally to blame with the workman for the accident, the £1,180 award being half of the total damages assessment.

MR. MARTIN JUKES, QC, for the employers, said the workman was helping to remove the metal pipe of a boiler at Bow in November, 1958. His foreman told him to saw one end of the pipe with a hacksaw.

The workman used the hacksaw for a few minutes, but thinking it too slow for the job, fetched a 7-lb. hammer, with which he struck the pipe several times without apparent effect. He then took a 14-lb. sledgehammer to the job, and after seven to ten blows he fractured a valve in the system, releasing steam which scalded his arms and legs.

Counsel contended that the defendants' foreman could not be expected to have foreseen that the plaintiff would be so foolish as to use a 14-lb. sledgehammer for the job, after having been instructed to use a hacksaw. The trial judge had attached importance to the fact that the plaintiff, a former farm worker in Ireland, was relatively inexperienced in building work, so putting a higher duty on the foreman.

Mr. Jukes said that every small job could not be supervised by the foreman. There would have been no danger if a hacksaw had been used.

LORD JUSTICE HARMAN: 'If an Irishman mends his motor car, he always hits it with a hammer. Every Irish garage has a good selection of hammers.'

MR. JUKES: 'I must remember that when I take my car to Ireland.'

Counsel submitted that the accident was wholly the plaintiff's fault.

MR. R. CASTLE-MILLER, for the plaintiff, said this was the first time he had ever used a hacksaw. An employer had a duty to consider the individual circumstances of each of his employees.

The plaintiff was told by the foreman that when he had finished cutting the pipe he could tap it free with a hammer. The plaintiff's case was that the defendants should have foreseen the premature use of a hammer.

LORD JUSTICE PEARSON: 'Tapping suggests a light blow. Smiting it with a sledgehammer ten times is quite different.'

Counsel contended that the risk was well within the contemplation of an ordinarily prudent foreman.

Judgment

Giving judgment LORD JUSTICE ORMEROD said the plaintiff used the sledgehammer after deciding that cutting the pipe with a hacksaw was too tedious for him.

The negligence alleged against defendants was that they knew or ought to have known that there was considerable steam pressure in the boiler and that the plaintiff should have been told that in the circumstances a blow might prove dangerous.

The foreman had said he had no reason to doubt plaintiff's reasonable competence as a labourer and he did not expect plaintiff to do the work not only in a way that was other than as instructed, but outside what anybody would expect.

The trial judge decided there was negligence by the defendants because they had not communicated to the plaintiff the danger which might ensue if violence were applied to the pipe, and there was negligence by the plaintiff because he used 'this somewhat unusual method' to break away the pipe.

It appeared to Lord Justice Ormerod that the employer's duty in this case was that which had been well-defined: whether the employers should reasonably have foreseen the danger.

'I cannot see why the foreman should have anticipated that the plaintiff, although not accustomed to the use of tools, if told to do work with a hacksaw, would go and use this highly unusual method,' he said.

LORDS JUSTICES HARMAN and PEARSON agreed.

Defendants did not ask for costs.

London County Council

Stag Brewery Redevelopment

AT A MEETING of the London County Council on October 17 MR. A. R. STAMP, chairman of the Town Planning Committee, in reply to questions from MR. M. BOND about the Stag Brewery and 5-13 Princes-row sites, said that outline planning permission had allowed for not more than 775,630 sq. ft. of office floor space. Mr. Bond had also asked whether 768,323 sq. ft. had been approved for blocks A, B, C, D and E and further permission for 35,800 sq. ft. had been granted, leaving an excess of 28,500 sq. ft. over the outline figure.

Mr. Stamp answered that of the 775,630 sq. ft., outline permission allocated 30,000 sq. ft. for office use to the west of the link road, for which 35,200 sq. ft. had been approved, giving an excess of 5,200 sq. ft. This represented a small proportion of the office space in the development and was accepted because of design difficulties occasioned by the second link road and the inconvenience of a small separate residential area.

Architectural Historians' Conference

Papers Submitted to the Edinburgh Meeting

The annual conference of the Society of Architectural Historians of the United Kingdom took place at Edinburgh from September 15 to 17. Below are summaries of three of the main papers given by Mr. David Walker, DA, on the first day, Mr. P. E. Johnson-Marshall, ARIBA, AMTPI, principal guest of honour at the annual dinner on September 16, and Mr. Colin McWilliam, MA, on the last day.

Towards a New Style

IN HIS PAPER MR. DAVID WALKER dealt first with the architecture of William Stark and David Hamilton. William Stark was shown to be one of the most advanced, most thoughtful, architects not merely in Scotland but in Britain as a whole, introducing giant Greek Doric orders almost concurrently with Smirke's Covent Garden and showing a surprising interest in baroque. The younger Hamilton, it appears, was probably associated with the Brothers Adam in their last years and showed a passing interest in the French Empire style. In the work of his first thirty years—roughly from 1798 to 1828—he revealed a familiarity with the early work of Soane. The work of his last ten years was extremely experimental and varied: some American, some German influence perhaps, probably due at least in part to the men in the office, Charles Wilson, John Baird II, J. T. Rochead, and his own son James.

Mr. Walker took a brief look at contemporary developments in Edinburgh and Aberdeen, stressing the influence of Germany on contemporary Scottish architectural thinking, which was of importance in studying the work of Alexander Thomson. He used William Burn's remarkably early attempt to create a new romantic idiom for country houses (1828).

With the death of Hamilton, the speaker continued, the more advanced thinkers—Charles Wilson, John Stephen, George Murray, Alexander Thomson, and to a lesser extent Rochead—split into two groups. Wilson developed a personal Italian style based on German prototypes, while an extremely personal brand of Greek was developed by John Stephen, whose development was cut short by his early death. His style was adopted by Thomson, who developed it far beyond anything of Stephen's. Thomson's Greece, like Wilson's Italy, was seen in part through German eyes. Rochead owed little to either and was much less of an original thinker than the other three, his inspiration being much more directly Italian.

The work of their principal followers—Burnet, mainly a Wilson man, and Barclay and Sellars, who for a time adopted a style based on Thomson's but expurgated of its Egyptian elements, was also mentioned. A fascinating thread running through the story of these later architects was the interest in the idea of the window strip, the use of iron in façades, and other methods of obtaining increased light, particularly for office buildings and large retail warehouses.

The City of the 21st Century

MR. P. E. JOHNSON-MARSHALL'S PAPER took the form of an appeal for an 'urban brief' (Chapman's phrase) on behalf of architects and town planners, and included some suggestions for how it might be drawn up on the basis of the human specification.

The argument he put forward was that no one in the future could expect to exist efficiently in cities which were not functional, or live a clean life in cities which were not hygienic, or even to survive in cities which were not safe. Balanced cities, in many senses, were necessary if we were to expect their citizens to be well-tempered (in the 18th-century meaning of the word). Another demand—especially relevant to this conference—was for a sense of continuity, not by compromise in matters of style, but by the preservation of complete visual scenes of the sort which abounded in Edinburgh.

Other points in which Edinburgh had set an example from her past were in the universal practice of good design in her Georgian development, from door knobs to the shapes of open spaces; and in the expression she had given to the 'hierarchy of urban buildings,' both of which were lost values in many of the cities of today. In such matters as traffic control, however, Edinburgh had lessons to learn. We should, by investment in new scientific equipment both on a large and small scale, said Mr. Johnson-Marshall, keep one jump ahead of progress and not two steps behind it.

Robert Adam in Scotland

BEGINNING his paper MR. COLIN MCWILLIAM suggested that there were various reasons for the general neglect of Robert Adam's Scottish work. Out of more than 70 buildings designed by Adam himself (apart from his brothers or his father) for erection in Scotland, only about half a dozen were well known—notably, of course, Mellerstain House in Berwickshire and the Register House and the front of the old quad of Edinburgh University.

Possibly the main explanation, continued the speaker, was that many of these buildings were difficult of access; there was such a large supply of Adam buildings in the south that writers of books about his works naturally tended to stop short at the border. Another point was that many of these buildings—especially those designed in the last stage of his career—were somewhat unpalatable and unfamiliar in detail even though their picturesque style might be thought very sympathetic to the tastes of today.

Robert Adam was born in Kirkcaldy in 1728, the son of William Adam, merchant, engineer and architect. The latter's works were often dismissed as clumsy and provincial but in spirit, if not in scholarship, they compared very favourably with English Palladian work of the early 18th century. Whatever their merits, there was no doubt that with the money obtained from these and other ventures William Adam was able to give his sons Robert and James the architectural education on the continent without which they could never have reached their full stature as architects.

The greater part of Robert Adam's Scottish output dates from the beginning and end of his professional career. Dumfries House, near Cumnock in Ayrshire, was started in 1754—before he had been to Italy. It was one of the largest complete Adam Houses ever built; fully furnished by Chippendale, it stands on the brink between the 'old' and the 'new' Adam. The latest stage of Robert Adam's work in Scotland was marked by a tendency towards a romantic style, shrewdly designed for the lowland laird, but actually owing very little to Scottish models.

Such buildings as Culzean (1777-92) and Seton Castle (1789) were symmetrical in plan and relied on the round machiolated tower of the Italian castle as a principal motif. Some very exciting room-shapes and sequences were made possible by this elevational treatment, but it was used to cloak interiors which were not materially different from other late Adam work; they gave their clients all the fun and kudos of living in a castle without any of the inconvenience. This castellated style, which to Adam was no doubt a means to recover his lost fortunes following the failure of the Adelphi scheme and the rise of rival architects such as Wyatt, would be traced from its first tentative beginnings at Caldwell House in Lanarkshire (where the client was persuaded to buy a ticket in the Adam lottery in the hope of paying the fees) to its apotheosis at Culzean.

Mr. McWilliam also mentioned the freak houses built in Scotland during Adam's last years, notably the curious triangular mansion at Walkingshaw. Finally, he explained and outlined some of the last projects, such as the unexecuted plan for the South Bridge at Edinburgh.

Specification Notes

A NEW VERSION of 'Specification Notes,' which is a supplement to 'Pre-contract Practice for Architects and Surveyors' has been produced. Unlike the original edition it is unbound and is printed on thin strong bank paper on one side only. It is published by Crosby Lockwood & Son Ltd., 26 Old Brompton-road, London, SW7. The price is 4s. 6d. each or 6 copies for 15s., post free

Building Control

Progress or Parochialism?

BY F. D. ENTWISLE, ARICS, AMI STRUCT E, AMI MUN E

IT IS DIFFICULT to understand the need for any difference in the standard of building control throughout this country. The effect of the difference that has existed, and still exists, has tended to create among architects, engineers and builders and even local authority surveyors responsible for building control, a justifiable suspicion that this function of local authorities has become surrounded by legal 'mumbo jumbo' in which the true object has been lost. It has become the subject of petty parochialism by many local authorities, who have for years past tended to desire a difference among themselves. This desire for variation is very difficult to understand, in fact there are no reasonable grounds for any differences in the framework of a code of building control for the whole country, as it is hoped to prove.

The last issue of Model Building By-laws in 1952 was an attempt to create throughout the country a uniformity of building control. Many local authorities co-operated and accepted the Ministry of Housing and Local Government's model series as their own by-laws. Other authorities, maybe not without reason, were of the opinion that other measures should be included. In spite of the Minister's desire for a uniform issue throughout the country, he did accede to some adjustments requested by various local authorities. Many of these adjustments were minor and of little importance, except perhaps to their sponsors, and achieved little save to create a difference which it was hoped to avoid.

Some of the additional measures, however, were most useful, so much so that it was difficult to understand why the Minister did not insist that other local authorities who accepted the first issue, should also adopt such additional new by-laws and so bring into being a uniformity throughout the country, superior to the first issue, in 1952.

Effects of Past and Present Control

The present differences throughout the country, although minor compared to those of many years ago, still do exist to the obvious annoyance of architects, engineers and builders, who operate over a large area of the country, and they can be forgiven for feeling that there is some mystery attached to building control. No matter how one may study the model series of building by-laws, one is likely to be met with difficulty when operating in different parts of the country. This should not be so, and it should be the desire in preparing building regulations, as envisaged under the new Public Health Act, 1961, that a uniform approach throughout the country should apply.

In considering the claim for uniformity it is worthwhile considering the geographical position of this country and its weather variations relative to building constructional standards. The latitude variation throughout England is but 50-56 degrees, and even from England to the north of Scotland only 50-58 degrees.

In considering the rainfall over the whole of the country there is not such a considerable difference even between the extremities. There is also no great variation in temperature and humidity. There is no justification, therefore, for any argument that there should be any difference in the standard of requirements as to weather resistance, thermal insulation or damp prevention.

Whilst there is a variation in the maximum wind pressures experienced throughout the country, these variations are due to differences in altitude or position relative to the coastline and have no relationship to administrative areas. In any case, the wind pressures which a building must be designed to withstand are set out in a British Standard Code of Practice based on scientific research and suited to the requirements of any particular case; information available to all local authorities and to which building by-laws refer.

Living Standards

It is also ridiculous to argue that standards of ventilation, heights of rooms, sizes of rooms, and other matters that lead to a proper standard of living conditions should vary throughout the length and breadth of the country; all members of the community require and should have the same standard.

We come now to building uses. Houses are erected all over the country and their occupants require them to be of the best possible standard. In this day and age, building control should endeavour to achieve this object for all. Offices are also erected in all parts of the country, many in larger cities, fewer in smaller towns and districts, but all must fulfil the same requirements. The occupants and users in all parts of the country have a right to the same standards of construction and enjoy the same amenities. The same applies to public buildings. Requirements for ventilation, structural stability, fire resistance, means of escape in case of fire, sanitary accommodation, and all other essential requirements of a modern civilisation are equally essential in all cases.

Factories, so far as working conditions are concerned, are covered by the Factories Acts, which show no differentiation whatsoever between a small town and a large city. All have to comply with the same standard of requirements.

Surely building standards should be covered in a similar way. A building in a large city should not have any higher standards than one erected in the smallest town or village. Whilst it can be said that many of the larger towns and cities have special requirements due to their types of industry, this is only true to a certain extent. Whilst the industrial centres may have many buildings peculiar to their own particular type of industry, even smaller places have on occasion one or two similar types of building to erect, and in consequence, similar control of such buildings is necessary so that it can be applied whenever a building proposal of that type is needed, whether it be dozens per year or one every dozen years.

Constructional Standards

Dealing with individual parts of the structure, no one can argue that the standard of drainage should be better in one part of the country than another or that a smaller community should be subject to the risk from defective drainage. As to the structural stability of buildings, whilst conditions as to wind pressure, loading and ground bearing capacity may vary throughout the country, there is no doubt that the same factor of safety and standard of structural design should be applied to all. Neither can it be argued that fire resistance measures need be other than uniform throughout the country. The fire risk and fire load in a building depend entirely upon its use and occupancy, not upon its geographical position.

We come now to the argument that a local authority likes to run its own business and show some individuality, but surely efficient uniformity of control with its obvious advantage should come before such petty parochialism, for that is all that it can be called.

One local authority, due to the efficiency of its officers, may often discover or consider that a certain type of control is necessary. Then there is no reason, and surely it is unethical to think otherwise, why the whole country should not benefit. It seems to me that is what professional institutions are for, and any member of such an institution would be failing in his duty as a professional man in failing to encourage the spread and use of such knowledge by others of his colleagues in other localities.

For many years the Building Research Station and the British Standards Institution, assisted by the appropriate professional and trade bodies, have added considerably to our knowledge of building materials and methods of construction. The result of this research is embodied in the various publications of these two organisations, the contents of which are readily available and, without, it is interesting to note, any varied application for different parts of the country. This is a further proof of the practicability of a national code of control.

Full advantage should be taken of the work of these organisations and more up-to-date regulations would allow for the fullest use of all the information available.

For many years work has been in pro-

gress on the revision of the building by-laws as applied to the London County Council, and more recently building regulations for Scotland, yet in spite of what has already been done in this direction there is already a working party set up to consider building regulations for England.

This would appear to be rather unnecessary, since the ground has already been adequately covered by the committees dealing with the London and Scottish revisions and it has been shown that there is little, if any, need for any difference between control in London and the control in Scotland. It would be sensible, therefore, that the work already done in Scotland and in London should be put to use and there is no reason why the regulations, as now drawn up for Scotland, should not be applied to England with very little amendment.

It will be said that section 61 of the Public Health Act, 1936, covering the making of building by-laws, does not cover the same ground as that covered by the Scottish regulations. Surely it is a simple matter to amend such legislation rather than go to the trouble and expense, plus the waste of time in further considering matters which have been covered adequately by the committee dealing with Scottish regulations. The draft Scottish Code of Regulations now in print covers a considerable amount of additional matter appertaining to building and if this is considered necessary, in Scotland, it may be assumed that there is the same necessity in England.

A Modern Code

This code is designed to suit modern conditions, is worded in less legal-like language, and in consequence should prove less difficult to understand by people in the building trades and professions. It has long been a fault of the building by-laws that they have been more an exercise for the legal minds than a guide to good building.

A standard code for the whole country on the lines of the Scottish Code could be used on the lines of a text book by technical colleges throughout the country, and in the offices of every architect and engineer and builder; a text book for use by one and all, readily understood by those who wish to look into the needs for good building construction. This should rid us at last of the petty parochialism that has done so much to bring building control into disrepute.

A study of the Scottish regulations will soon make it clear, however, that there is a considerable increase in the extent of work required in enforcing building control. There is need, therefore, for a new approach by local authority surveyors to this problem, for there is little point in obtaining new building control as far reaching as outlined in the Scottish Code, if the staff available to enforce such regulations is not forthcoming.

If, however, it is acknowledged that good and extensive building regulations are necessary to meet the ever changing demands of modern construction, then the means must be found and the difficulties in enforcement should not stand in the way of an attempt to achieve a satisfactory standard of control.

There is one point to the advantage of this type of code of control. Since there will be but one code throughout the country, there will be greater encouragement for architects, engineers and builders to learn the needs of such regulations, and not, as so often in the past, be discouraged by the differences that exist from town to town and the over emphasis on the legal, as opposed to the constructional, aspect.

There is an urgent need for a combined effort by the professional institutions and trade organisations involved in building regulations. These include quite a few of the leading institutions, since building construction no longer merely involves the work of accepted building trades, but embraces a very considerable amount of structural engineering and other sciences. It must surely be the hope of all concerned with good building that at the next revision of building control there shall be a national code of regulations for use by all local authorities throughout the whole country.

The time is now opportune, and if we are to achieve anything worthwhile, then all concerned should make it known that they are in favour of such a national code of regulations, on the lines of the Scottish Code. If this means amendment of existing legislation, then steps should be taken for this to be amended. This is a cause worthy of every effort.

Lift Slab Construction

Interesting Scheme at Poole

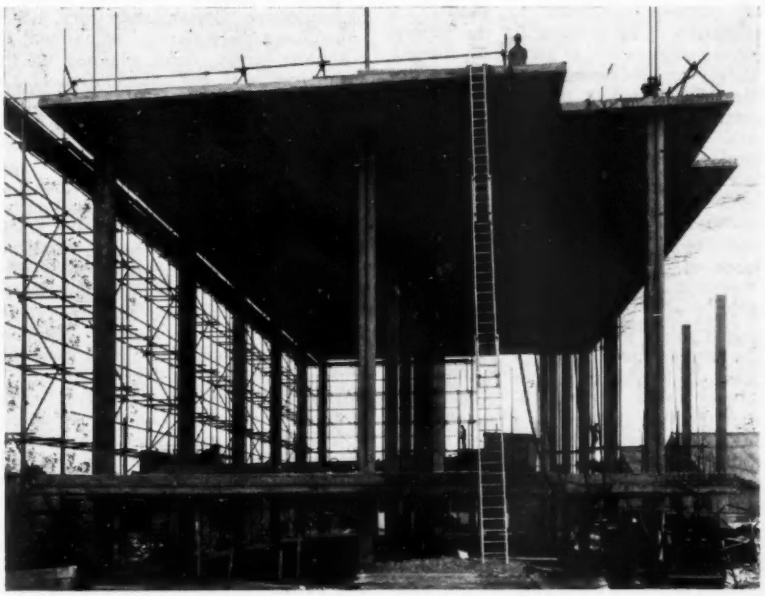
DURING the next few weeks the first, second and third floors of a large four-storey warehouse and office block, now being erected for the Laboratory Chemicals Division of the British Drug Houses Ltd. at Poole, Dorset, by John Laing Construction Ltd., are to be raised from the ground hydraulically by the lift slab method of construction. Work on the new building, which is 340 ft. long and over 100 ft. wide, began in March this year as the third and final stage in a £1m. development programme by BDH and is due for completion by mid-1962.

The building has been divided into four sections, each including up to 24 precast concrete columns, 16 in. sq. and 38½ ft. high. Reinforced concrete roof and floor slabs, 9 in. and 10 in. deep, with a separating medium of resin dissolved in a volatile spirit, have been cast at ground level round the columns and are being raised at the rate of some eight feet an hour. Each section is to be completely lifted and connected within one week. British Lift Slab Ltd., who are carrying out the lifting operation, are using Mark 9 automatic equipment. Each hydraulic jack has a maximum working capacity of 70 tons and the equipment is so designed that all units work together.

Jacks are mounted on the top of the columns with rods running down, which are connected first to the third floor slab. A reciprocating action causes the rods to be raised and passed through the body of the jacks, thus raising the top slab and subsequently the lower floor slabs, to their final positions.

The architect for the project is Mr. Sydney Greenwood, ARIBA, and the office of the chief civil engineer of John Laing & Son Ltd. has been responsible for the civil, mechanical and electrical design.

Work in progress on part of the building



Foremanship Training

NFBTE Council Approves Report and Recommendations

THE MANAGEMENT TRAINING COMMITTEE has prepared a report, for the NFBTE council, on foremanship training because it believes that there is an urgent need to improve the quality and efficiency of the supervision of building projects and that this can be achieved only if building firms are aware of, and support, the courses which are available and take an interest in the efforts being made to improve training for site supervision. The full text of the report is as follows:

When the National Advisory Committee for the Training of General Foremen invited the City and Guilds of London Institute to co-operate in the introduction of a course and examination in general foremanship studies, it was estimated that at least 350 men would require to qualify each year if the industry's needs were to be met. It was, of course, expected that it would take some time for the numbers entering for this new examination in foremanship studies to build up, but the committee must express its disappointment at the slow rate of progress which has been made. In the six years since the examination has been held there have been 306 candidates, the greatest number in any year being the 77 candidates for the 1961 examination.

The committee appreciates that the condition that candidates for the foremanship course must either hold an ordinary national certificate or take a special preparatory course in building construction may have deterred some potential general foremen from entering the course.

Following the revision of the City and Guilds craft courses, and in particular the course preparing for the full technological certificate which now covers building construction and craft foremanship studies, the position has improved. Those who obtain the full technological certificate will no longer require to have an ordinary national certificate to qualify for admission. The syllabus for the general foremanship course is also being revised. These revisions, however, cannot of themselves increase the number of candidates taking the course and examination. This can be achieved only if employers will encourage suitable men to enter. The committee hopes that more firms will give the necessary support and encouragement.

Scope of Courses

The committee would like to make it clear that these courses are not intended solely for candidates who originally entered the industry as craft apprentices. It is true that when foremanship courses were introduced immediately after the War the emphasis tended to be on training craftsmen who had shown ability to supervise building work. The regulations for the certificate course in general foremanship studies make it quite clear, however, that entry is open to those who have satisfactorily completed their basic training, with related technical education, in the building industry either as craftsmen or in administrative positions closely concerned with site work.

Recruitment from Administrative Side

With the increase in the numbers of boys staying on at school to take the general certificate of education, it is reasonable to assume that an increasing proportion of general foremen will, in the future, be recruited from those who enter the industry on the administrative side and study for national certificates in building.

Existing foremanship courses normally involve attendance at evening classes for two years. Compliance with this requirement has been difficult for some candidates and it has probably deterred others from entering. Owing to the nature of their employment potential general foremen may not be sure of remaining for two years within reasonable travelling distance of a technical college. Even where they do they may find it too strenuous to do all their preparation in the evening after a full day's work.

The committee wishes therefore to point out that other methods of organising the course are possible and have been tried out successfully. It commends in particular the course at the Birmingham College of Technology, where, by arrangement with the employers, the students are released for one afternoon a week and continue their studies on the same evening. It wishes to draw attention also to the block release course organised by the London Master Builders Association and the Brixton School of Building, which involves full-time attendance for two periods of a fortnight each for two years.

Recommendations

The committee has invited the council to ask regional federations (a) to examine the provision and organisation in their region of courses preparing for the certificate in general foremanship studies; (b) to take whatever action may be required to improve this by the introduction of block release courses for candidates not able to attend evening classes regularly and/or by the provision of courses involving daytime attendance; and (c) to encourage members to assess their future requirements for foremen and select suitable employees, whether trained on the craft or administrative side, to attend a course in general foremanship studies.

The council of the NFBTE has given its approval to the report.

Air Pollution

New National Survey Planned

THE NATIONAL SOCIETY FOR CLEAN AIR'S conference at Brighton, meeting on October 4, received and discussed three reports on widely differing aspects of the air pollution problem. They were on the new scientifically-planned National Survey of air pollution; the reception given to the Society's recent proposals for the compulsory training of boiler firemen; and a statement of policy and proposals on smoke from diesel vehicles.

DR. S. R. CRAXFORD and other officers of the Warren Spring Laboratory, DSIR, contributed the paper on the national air pollution survey, being planned by the Laboratory with the co-operation of 120 local authorities. The latter have been selected so as to give, between them, representative records of air pollution levels throughout the country.

For many years now measurements of pollution have been made by local authorities, guided and assisted by the DSIR, and in recent years the number of instruments in use has grown very considerably, providing, as Dr. Craxford put it, an 'adequate, if rough and ready picture of air pollution in our towns.' The new survey is an attempt to obtain more significant information by means of a smaller, more economic and more representative selection of measurement points.

A working party was set up to examine the problem, and found that 'it was desirable to obtain as accurate a record as possible of the amount of pollution in the air where people live and work, in order to judge the success of any remedial measures that may have been taken in any particular locality, and also to assist local authorities in considering plans for future industrial development in relation to present levels of air pollution.'

'In addition,' continued Dr. Craxford, 'a quantitative picture of the pattern of air pollution throughout the country is required for medical investigations into the connection between air pollution and disease.'

Towns throughout the country above 5,000 population have been graded according to domestic and industrial coal consumption per unit area, and natural ventilation characteristics, making 27 different categories in all. From these a random selection of 120 towns has been made. Sites for the instruments are based on comparable classes of district. The familiar deposit gauge, measuring the weight of pollution deposited over a given area, will not be used and the measurements will be confined to the daily measurement of smoke and sulphur dioxide suspended in the air.

These measurements are already being made in about one-half of the selected towns. The report includes a table of the towns included in the representative sample, together with other towns taking observations outside the special survey.

Digest of Welsh Statistics

THE SEVENTH ISSUE has been published of the 'Digest of Welsh Statistics' (HMSO, price 7s. net). It contains 98 tables relating to various social and economic matters. Fresh tables have been introduced to bring it into line with similar publications.

Estimating and Planning

The Role of Two Specialist Functions in Building

A MEETING of the London branch of the Institute of Building Estimators was held recently. Mr. L. J. Bradshaw was in the chair. A talk was given by MR. W. PRIOR, planning engineer to a contracting company, who said that the meeting was to have been a discussion between two members of the Institute on the need for a specialist planning engineer, both of whom agreed that planning was necessary. It was through their efforts that it was he who was giving the talk. Mr. Prior said that he would confine himself to the 'normal type of contract.' He would not consider the contract where there had been architect-builder collaboration, nor the negotiated or 'all-in' service contract, but one where only ¼ in. scale drawings were available at estimating and planning stage, where no nominated sub-contractors or suppliers had been decided upon, and where detailing was nowhere near as advanced as it should have been. 'In other words, the normal contract.' Mr. Prior then continued:

Not being an estimator, I would not imagine myself qualified to put your case, and naturally I am biased. I shall, therefore, state the estimator's case briefly, knowing full well that the discussion which follows will be a great leveller. As I see it, in preparing a tender, the estimator must obviously look into the methods of operation and the timing of these operations, and to enable him to look at the contract not as a series of isolated operations, but as a whole, he must prepare a programme. In fact I will go so far in my capacity as a planning engineer to concede that an estimator does, in fact, everything during the tendering stage that a planning engineer does during the pre-contract stage. On that basis one can argue that by putting a couple of coats of paint on the estimator's programme it would be fit for presentation to both the architect and to the site. That very briefly is the case for the estimator as I see it.

My next problem is how to put the case for the planning engineer. I thought first of the argument that started off this discussion, that because the estimator started planning, he should carry it through to the end. Logically, one could then argue that, having prepared the estimate and done the planning, he should carry on and do the job, prepare the final account and then, presumably, start the process all over again.

Production Planning

There are quite a number of types of planning—financial planning, policy planning, production planning and so on. The one we are most concerned with is production planning, which is in two parts. The first part states 'It is the activities necessary to determine the best methods, quantities and dates of production.' I have already conceded that this could well be done by the estimator: it might be a good thing if it were so. It would certainly give a clearer indication to the architect of our method of carrying out the work, based upon the information that was available at the tendering stage. But if we stopped there, the overall programme that has been produced at that stage, no matter how well done, would wind up, as so many of them do, just as a pretty picture on the wall of the site office.

Let us look at the second part of the definition, 'To ensure that these plans are achieved or else adjusted promptly so that they may be achieved.' I would suggest that these functions are in fact an almost continuous process. How can another technician who is working against time cope with them? What would happen when the overall programme starts to go wrong, as frequently happens, even with planning engineers preparing them? How are variation orders to be incorporated in the programme as and when they occur? As a contract progresses, more and better details are coming through which necessitate a change in the original plan. Then there is the question of programmes of co-ordination with heating and ventilating engineers, electricians and so on. Could an estimator in the middle of preparing a tender hope to cope with these things?

I suppose the argument could be put up that this is the job of the agent or general foreman. In days gone by, however, the builder had to call in the specialist estimator, so the day has now arrived when the builder, agent and general foreman need the help of the specialist planner. Many other industries have already found the need for specialist planners and I think it would be both wrong and short-sighted for our industry to think that we were different from any others.

This question of specialists was well illustrated recently on television when a new suspension bridge was shown being built alongside an existing bridge with the engineer's name—'Brunel'—written on it. When the engineer in charge was asked by the interviewer whose name was going on this bridge, he replied that there would be no name as the numbers of different types of specialist engineers were so many. I suppose one could argue that somewhere along the line we have made a retrograde step since individualists such as Brunel no longer design bridges. It could be further argued, and probably with greater strength, that the generation that has produced a man in space should be able to produce a man equal to Brunel, or is it just that the age of specialisation is with us?

Discussion

In the discussion that followed MR MUDD said that planning was common sense. An estimator had got to prepare a plan and how detailed this was depended on the type of job for which he was tendering. He thought an estimator had to prepare a logical sequence for the job and so prepare a programme.

MR. PRIOR pointed out that more specialists did not increase overheads. The building industry had a small overhead content and it was time it increased overheads in order to increase productivity.

THE CHAIRMAN then said: 'There seems to be a question as to whether the estimator should alone prepare a plan during the preparation of the tender or whether the planning department should enter into the picture at the estimating stage.'

MR. TYMIS thought it depended on what was being priced. 'I should say planning enters far more into civil engineering than into building. Brickwork is a unit rate depending on height, but with a tunnel, ground type, distance, water table, etc., make it essential to plan at the estimating stage.'

MR. LAYTON considered that planning was no more accurate now than it was before the war when it was carried out by the site agent and contracts manager.

MR. PRIOR did not think that planning in the building industry had reached the stage of specialisation that it would.

MR. TYMIS was convinced that planning should be done by the estimator concerned. 'Even if planning reaches a highly specialised state, the planning officer does not know the time content in an estimate until the estimator has actually included it in the estimate.'

Tests for 7-year-old Trucks

How Builders' Vehicles Will be Affected

FROM A TRANSPORT CORRESPONDENT

FROM the beginning of next year the compulsory testing scheme at present applicable to ten-year-old vehicles will be extended to those that have been registered for seven years or over. It may thus affect a larger number of vehicles in the average builder's and contractor's fleet.

Goods vehicles within the scope of the scheme are those up to 30 cwt. unladen weight. Dual-purpose vehicles of the utility type, adaptable for carrying either passengers or goods, must be tested if they are of 2 tons unladen weight or under. The conditions will be the same as those now applying to 10-year-old vehicles, and the tests will be directed mainly to verifying that the brakes, steering and lighting are efficient.

Builders who are operating 10-year-old vehicles should note that it will be necessary to produce a valid test certificate the next time the excise licences for these vehicles are renewed. A fresh licence will be refused unless a certificate is in force. Test certificates are valid for 12 months from the date of issue, after which old vehicles must undergo a further test.

Official returns show that about 40 per cent of the vehicles submitted for test under the 10-year scheme have failed the first time, but the majority have been passed after faults have been put right.

LCC Scientific Report

Testing of Building Materials and Components

THE ANNUAL REPORT for 1960 of the scientific advisor to the Public Health Department of the London County Council has been published. The report, which can be obtained from the LCC, price 1s. 3d., covers the many aspects of the advisor's work. Extracts are given below from the section devoted to building materials:

Examination of the synopsis of building material samples shows a small decrease in both the number of general samples and the number of soil sulphates compared with 1959. The reduction in the total of general samples is due mainly to the fewer vitreous enamel units examined (223 in 1959 and 53 in 1960). This is an interesting difference as only defective units are examined and it would thus appear that the general quality of sink units and baths supplied to the council during 1960 has improved.

Materials Examined

The determination of the percentage of sulphate in soil samples enables recommendations to be made for selection of the appropriate cement for the foundations. This work is carried out in advance of the building operations, often by as much as two years, to enable the architect to incorporate the requirements in his specification. It would appear that if the higher concentrations of sulphate are only due to selenite (calcium sulphate) and it can be shown in particular that magnesium sulphate is absent, then Portland cement and sulphate resisting cements will probably have a wider range of application than at present and a considerable reduction in the cost of foundation work will result. Again, the modern techniques of in situ piling cannot be readily applied to concrete made from high alumina cement unless the cross section of the pile is small. The case, therefore, sometimes arises that, whereas the soil requirements necessitate high alumina cement, the structural size of the piles makes its use a matter of great difficulty.

Many samples of asphalts and tarmacadams are examined each year but rejections due to failure to comply with the relevant British Standard are comparatively few. Only eight samples (all road surfacing materials) were found to be unacceptable during 1960. The position with roofing felts and bituminous dpc's was not so satisfactory, however, as 22 per cent of those examined were rejected. The proportion is expected to improve, however, now that the revision of BS 747, 'Roofing Felts' (bitumen and fluxed pitch), will provide specific limits to the constituent materials of roofing felts. Several proprietary compounds containing a bituminous or plastics binder (e.g., pvc) and intended for roof coverings have been investigated. These may have the advantage of ease of application by spraying and are particularly applicable to roofs of unusual shape, for example hyperbolic paraboloids. Positive recommendations could not always be made, especially in the case of recently developed plastics. Building by-laws must be expected to lag behind newly developed materials, and for the use of these it may be necessary to seek a waiver.

Tiles and Plastics

A number of ceramic tiles was received to determine whether or not they were suitable for external exposure. Over a number of years tests have been devised which reproduce reasonably faithfully, under accelerated conditions, the effect of long exposure to weathering. These tests incorporate hot/wet cycles in an autoclave followed by freezing/wet cycles designed to produce large ice crystals. The best tiles pass both the tests without damage and by suitable adjustment of the conditions of test varying qualities can be separated. Two new types of tile adhesive were submitted for analysis and practical trial. The first type based on a retarded Portland cement was found to give satisfactory performance although its use may have to be restricted at present to internal or otherwise dry situations. The other type was based on organic materials and some samples were colourless. Provided the adhesive strength is adequate these preparations should be preferable, since their plasticity permits some differential movement between the base and the tile. There was some evidence, however, that the optimum performance of this type of adhesive could not be obtained unless the concrete backing were first treated with a suitable primer.

Amongst the more interesting and challenging samples were those manufactured from the newer plastics. As new polymers become economically attractive applications for their use in building operations are rapidly suggested.

Two mastic materials may be mentioned here. Tests both in the laboratory and on the site have shown that bedding and strip mastics based on polythene and butyl rubber have exceptional resistance to ageing, combined with high chemical resistance and good handling qualities. Another interesting material was found to consist of a mixture of an epoxy resin and bitumen. When cured this produced a rubberlike compound and by incorporating fillers such as Portland cement, slate dust, etc., varying degrees of hardness could be obtained. Its particular virtue was that it could be cast in situ and thus accommodate awkward voids or joints requiring a resilient filling.

Large Areas of Glazing

In recent years the use of large areas of glazing has become common. Some disadvantages, however, are now apparent and these include overheating and glare in summer, coldness in winter, low sound insulation and lack of privacy. Several of these disadvantages can be overcome by the use of venetian blinds and it is noticeable that such blinds are becoming increasingly popular. Attempts to remove this glare and reduce heat penetration have also been made by applying to the glass surface coatings of tinted alkyd resins. Although the light so modified is physiologically satisfactory, it at present remains to be seen whether the coatings are sufficiently durable to warrant the initial cost.

Site Failures

Weather conditions during 1960 were wetter than average and some site defects arose from the lack of water resistance of certain materials. Wood wool slabs were found disrupted and collapsed, clinker blocks gave rise to expansion difficulties and there was an increased incidence of efflorescence on brickwork. Efflorescence, whilst fairly common on some types of bricks, was during 1960, also found on London stocks. On one particular site the high humidity led to oxidation of ferrous salts occluded within the brick and as a result the mortar joint became badly 'rust' stained. It was found that using a 1 : 6 air entrained mortar instead of a 1 : 1 : 6 composite mortar greatly reduced the incidence of staining. The answer to many such problems could simply be 'keep your materials dry.' Under site conditions this is, of course, often very difficult. Perhaps the wider use of polythene sheet over a suitable light framwork will help the architect to reduce the hazards of wet weather.

Although only a few samples were examined, there appeared to be a trend for clinker blocks to have an increased proportion of cement and a higher percentage of combustible matter (highest recorded loss on ignition 26.4 per cent). Both trends are considered to lead to products having undesirable properties and probably reflect the manufacturer's difficulty in obtaining suitable clinker. The low number examined is due to the policy of using other lightweight blocks having better moisture stability and higher thermal insulation.

Overheating of asphalts still occurs, particularly where the distance from the pot to the laying site is great, or if the material being heated is very hard, e.g., pitch mastic floorings. A useful observation, however, was made during a site visit that the risk of failure from this cause was lower than suspected, since the difficulties of spreading a too-hot asphalt and the physical discomfort from the radiated heat brings forth strong objections from the spreader.

Research and Development

The housing division of the architect's department invited the branch to join a group developing a building project of a novel character. It was thus possible not only to determine on the site fundamental characteristics of the material used but also by frequent consultation to help solve the many problems which arose. The project consisted of the use of unreinforced lightweight concrete for a thirteen-storey block of flats. The lightweight concrete used, based on expanded clay aggregate, was found to have a surprisingly low water absorption (24 hours). The expanded clay aggregate concrete (density 69 lb. per cu. ft.) having a 7 per cent absorption and the aerated pulverised fuel ash block (density

51 lb. per cu. ft.) a 36 per cent absorption.

It is evident that the closed cells do not become saturated, presumably because each granule bears a surface coating which prevents the ingress of water. The use of a water-shedding external coating to the structure was therefore found to be unnecessary. In the absence of a high water absorption, the macrocellular nature of the aggregate would appear to eliminate the risk of spalling of the concrete due to frost action. Mixes of varying proportions were used on the site and experimental blocks made from these were examined in the laboratory to determine their thermal conductivity. Special moulds were made enabling 12 in. by 12 in. by 2 in. slabs to be cast with truly flat and parallel faces. The co-operation of Messrs. W. K. C. French Ltd. is gratefully acknowledged in constructing the moulds and assisting the scientific observations at all stages. Two examples of mixes yielding concretes of widely different characteristics are 1 : 2 : 3 mix of PC, sand and expanded clay aggregate (2.5 per cent water, 89 lb. per cu. ft.) giving a 'k' value of 4.8 and 1 : 10 mix of no fines (and air dry, 30½ lb. per cu. ft.), giving a 'k' value of 1.05.

Measurements were made on site of drying and thermal shinkage on both restrained and unrestrained concrete. It was possible to shew that these movements were unusually slight, and hence in the restrained material the risk of cracking is extremely low. Currently an acoustic survey is being made of the finished building to determine the sound-proofing properties of this interesting concrete.

Double Glazing

In conjunction with the development section of the architect's department further work has been undertaken on problems connected with the use of double glazing in a wooden surround. Use was made of a butyl rubber extrusion to mount the glass in the frame and to provide an airtight joint. Owing to the novel design of the extrusion, replacement of broken panes would appear to be simple and maintenance costs in the finished unit should be low. The difficulty of obtaining closure of the panel, especially at the mitred corners of the extrusion, led to the adoption of a small breather insert carrying a microfilter to exclude dust. Theoretical considerations show that provided this breather communicates to the outside atmosphere the unit should generally remain free from condensation.

An interesting full scale investigation was carried out on the practicability of laying hot asphalt over an expanded polystyrene roof insulation. A preliminary laboratory experiment had indicated that a 1 in. cement-sand screed laid over the polystyrene should give sufficient protection. On the site a ½ in. expanded polystyrene sheet was covered with a 1 in. sand-cement screed and a layer of sarking felt. Continuous measurement of temperature by means of thermocouples showed that at no time did the upper face of the polystyrene reach a temperature sufficiently high to damage it, even when the asphalt was laid at a temperature 50°F. above that recommended. It was also found that the sarking felt contributed greatly to the protection of the underlying components when laying hot asphalt. Half the completed roof was surface-treated with white chippings and since the thermocouples are already in position, the opportunity will be taken during the summer to compare the heat absorption properties of the two roof surfaces.

Isle of Man Sea Terminal

Douglas Harbour Project

THE DEVELOPMENT of the pier approach and new sea terminal buildings for the Isle of Man Harbour Board is now in the initial stages. When complete it will provide extensive accommodation for the ½m. passengers passing through Douglas each year. One of the planning aims was to meet the traffic problem at the pier approach. In the limited area available separate parking or waiting areas had to be provided for the different types of vehicles, i.e., public transport, private coaches, taxis and private cars.

The architects, Messrs. Davidson, Marsh and Company with Mr. T. H. Kennaugh, carried out a special study of passenger movements before finalising the layout so that pedestrians may move between the arrival or departure piers and any of the new buildings and transport waiting areas, with the minimum interference with each other, without having to cross the paths of the vehicular traffic, and almost entirely under cover.

Other problems were to provide an appropriate terminal building with the facilities required by both travelling and resident visitors, and to provide staff and office accommodation for the harbour board. A building had to be designed which aesthetically would satisfactorily terminate the beautiful sweep of Douglas Bay and the promenade.

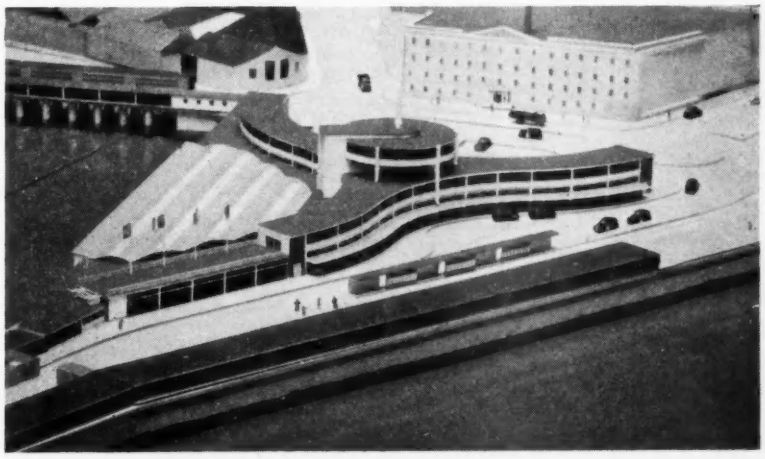
The ground floor of the building will house a passenger concourse, providing maximum shelter for passengers between the boats and the various transport facilities; a large waiting hall; seating buffet and waiting rooms; toilet accommodation; left luggage facilities; information and booking offices and essential shopping facilities. The first floor will contain glazed promenade space and also the harbour board offices and main kitchen. The second floor will be confined to a concrete central core, partly supporting the restaurant above and housing a passenger lift and main staircase. There will be a public restaurant on the third floor to which access will be by a central lift and staircase. A concrete spire will rise some 70 ft. above the roof of the restaurant.

The new buildings are to be constructed on the site of the existing terminal to obviate the necessity of new marine work. Construction is planned in five phases, each phase being completed in one working period because no work can proceed during the summer influx of visitors. At the end of each period, approximately seven months of each year, there must be sufficient of the old and new buildings to cope adequately with the summer traffic.

The structural design has been largely influenced by consideration of the constructional phases and makes considerable use of prefabrication. The single-storey waiting hall will consist of precast concrete curved rib frames at 25 ft. centres between which will span timber joists. The two-storey part of the main building will consist largely of precast columns and beams probably making use of a proprietary type of floor which itself consists of precast units. Only the central core of the building supporting the restaurant will be mostly of in situ construction since, other than columns, it does not lend itself to economical precasting.

The total cost of the complete scheme is expected to be about £400,000. The consulting engineers are Messrs. E. W. H. Gifford and Partners, of Southampton.

Model of the new sea terminal at Douglas, Isle of Man



Urban Shopping Centre, New York

A Multi-storey, Multi-purpose Building

FROM A USA CORRESPONDENT

WESTCHESTER TERMINAL PLAZA is a multi-storey shopping centre nearing completion at New Rochelle, New York. It is a 24-level structure with 70 retail outlets including a complete department store, a 100-room hotel, a railway station, a bus terminal, a 15-storey office building, and a parking garage for 5,200 cars. The project covers a 12-acre site and the accommodation made available is comparable to conventional shopping centre planning covering 80 acres. The area allocations are parking levels, 2m. sq. ft.; office accommodation, 200,000 sq. ft.; the hotel, 60,000 sq. ft.; and shop space, 750,000 sq. ft.

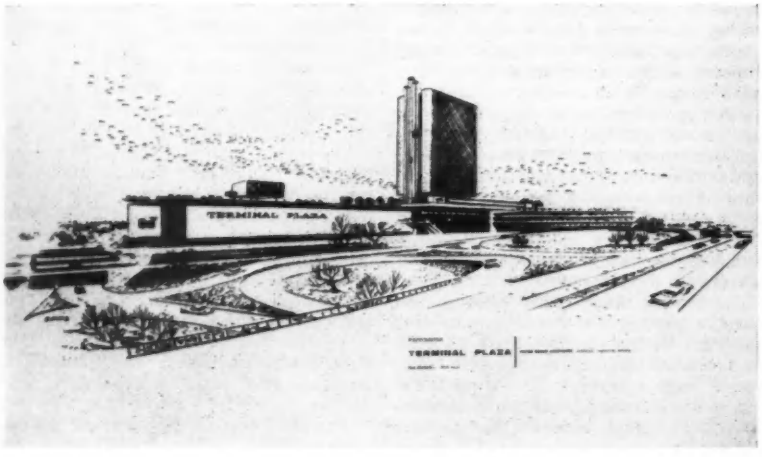
The first nine levels of the Terminal Plaza are devoted to shopping and parking facilities: the first three floors are use for parking; the next two for merchandising, with storage facilities and delivery docks on mezzanine floors; and a further three are parking levels over which the shopping area proper is located. The remaining 15 floors contain the office building and the hotel. Other features include a swimming pool, an ice skating rink, a bank, a post-office, an auditorium, a bowling alley, restaurants, coffee shops, bars, and concessions. The shopping area, partly skylighted, will be artificially climate-controlled throughout the year to ensure constant moderate temperature. It features landscaped indoor malls and courts, a sidewalk café, rest benches, fountains, and sculpture.

The architects, Victor Gruen Associates, of New York, have achieved complete segregation of vehicular and pedestrian traffic within the centre. All cars, taxis and buses will be funnelled to parking levels; taxi stands and the bus terminal escalators will move rail travellers from the station platforms to the rail terminal level from where they will be able to walk to the shopping areas, take escalators to the hotel or the office building, or use other escalators to reach any of the parking levels. Escalators and elevators also provide easy access to all parts of the shopping area for bus travellers, office workers and others. Service traffic will be routed through an underground tunnel and thus will not interfere with the movement of pedestrians.

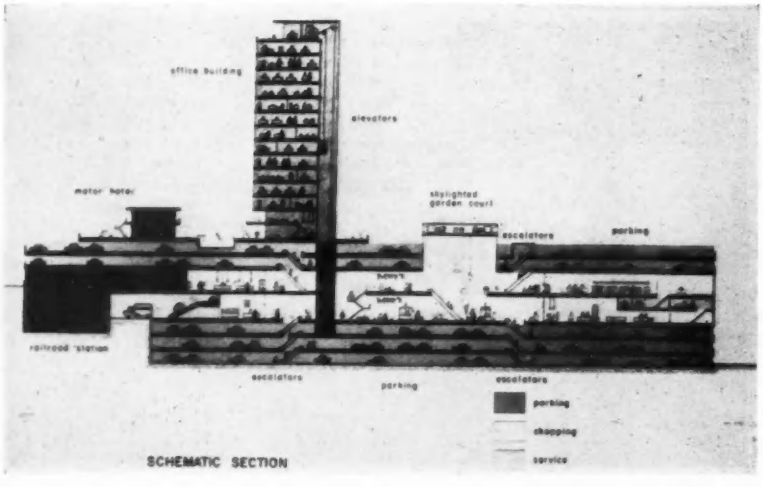
The office tower, which is faced with glass, will be protected by a sun grille of gold anodised aluminium, brilliantly illuminated by night to provide a focal point for motorists on the nearby New England Throughway. One side of the tower will be served by cylindrical transparent, glass-caged, elevators.

Much of the exterior of the building is faced with coloured tiles and other areas have been left open to permit a view of some of the parking decks. A large glazed roof provides the rail terminal with natural lighting, and the escalators connecting the station platforms with the waiting room will also be enclosed in glass. The total cost of the Westchester Terminal Plaza is $41m.

New Rochelle is the hub of a large network of expressways and highways and it is estimated that some 15,000 cars will use the terminal's parking areas each day.



Above: Architects' perspective of the Westchester Terminal Plaza. Below: A schematic section



Private Street Works

Bonds as Security for Payment

FROM A CORRESPONDENT

THE LAW COMMITTEE of the Association of Municipal Corporations have made it clear that in their opinion bonds offered by recognised insurance companies and banks could reasonably be accepted as a form of security under the advance payments code for private street works as contained in the Highways Act, 1959.

This is in the published reply to a letter from an authority seeking the AMC's views and saying that they had to date, in spite of strong representations by certain developers, consistently refused to accept such bonds on the grounds that they did not constitute a security which was readily realisable should default occur in completion of any private street works.

The council had, therefore, as a matter of policy, always asked developers to deposit either the requisite sum of money or the title deeds of some substantial and sufficient property. The letter (from the town clerk) continued:

'The matter may, however, arise again in the near future and with this in mind I should be grateful for any information on the subject which you can give me.

'I might add that I have posed the same question to the Ministry of Housing and Local Government and the Ministry have replied that in their view the particular section of the Highways Act does not exclude the acceptance of a guarantee bond but that it is a matter for the local authority to decide in each particular case whether a bond so offered represents sufficient security.

'It would, of course, be a somewhat invidious task for a local authority to decide upon the relative merits and standing of any guarantor whose bond was offered to them, and for this reason the policy previously adopted is being continued for the time being.'

Future Development of the West Midlands

Statement of Proposals Submitted to the Government

IN JUNE, at a conference at Birmingham of representatives of local authorities and other public and private organisations, the Town and Country Planning Association and the Midlands New Towns Society described their draft proposals for dealing with the related problems of the continuing over-growth of the West Midlands conurbation and the adjoining areas, and the continuing decline of districts and whole counties on the English/Welsh border.

In a joint statement submitted on September 18 to the Minister of Housing and Local Government, the Town and Country Planning Association and the Midlands New Towns Society describe the problems of the wider West Midlands region, and set out their revised proposals for its future development.

The West Midlands conurbation was the only one of the six conurbations to increase its population markedly (from under 2¼m. to over 2½m.) between 1951 and 1961. On present trends the population of 2½m. is expected to grow by about 300,000 in 20 years.

Employment in the conurbation is rising much faster than in the country as a whole through increases in office and service jobs. The labour shortage has encouraged steady migration into Birmingham. Only 1,000 slums a year are being cleared while another 4,000 houses become unfit. By 1981 Birmingham should replace 120,000 obsolete houses. Another 150,000 will be needed to relieve overcrowding and cope with the increasing number of separate households. Thus a total of 270,000 is needed by 1981.

At the very most, the statement continues, 76,000 might be built in the redevelopment areas and about 100,000 in the outer districts. Therefore an absolute minimum of 100,000 dwellings must be built beyond the Green Belt by 1981.

The problem is to reduce the acute congestion of population, employment and traffic in the conurbation; carry out an immense slum clearance and redevelopment programme; accommodate the great pressures generated by economic and population growth; and prevent further growth of the conurbations. To achieve these aims, 'it is urgently necessary now to plan the location beyond the green belt and provision over the next twenty years of homes, workplaces, schools, shops and all the related requirements of modern life for over 300,000 people from the West Midlands conurbation. No less severe a problem for the places concerned is the continued economic decline of villages, towns and entire counties in the western parts of the region, and the need to draw people and jobs to them in substantial numbers.'

The Policy Proposed

The broad aim must be a much better balance of population, economic activity and social facilities within the region. The location and provision of homes, workplaces and other facilities for over 300,000 people in the next 20 years should be planned, it is stated, as follows:

Two New Towns of about 50,000 population each should be built under the New Towns Act, 1946. One should be at Dawley, in Shropshire, now being studied for the Government by Mr. A. G. Sheppard Fidler, MA, FRIBA, Birmingham's city architect. The Woofferton-Orleton area on the Shropshire-Herefordshire border, where population is steadily falling, is suggested for the other. Swynnerton in Staffordshire is an alternative.

Town expansion schemes for about 150,000 people and their related employment should be carried out. Several large expansions should be encouraged and 19 towns are listed as meriting close consideration. The Town Development Act, 1952, should be amended to give greater Government 'pump-priming' assistance in the early years when local expenditure is heavy and income from all sources very small. County councils should give financial and technical aid. The expanding towns should be encouraged to acquire at the outset all the land needed for development. This could then be sold or leased to developers at prices reflecting the increased values brought about by the council's initiative.

Special development schemes for 50,000 to 70,000 people and their employment should be carried out (a) in the Forest of Dean and eastern Monmouthshire area; and (b) in the upper Severn Valley in Montgomeryshire, in the Radnorshire-Shropshire border, and in the north Breconshire-south Radnorshire area. These 'special development schemes' would best be undertaken by a regional development corporation, appointed by the Government and given a roving commission to co-operate with local authorities in promoting industrial development.

Industrial employment in the conurbation must be reduced, the statement continues, by continuing the policy of guiding firms to new areas. In addition, factories vacated by firms moving out must be bought by the authorities to prevent re-occupation by incoming firms. More Government assistance is needed for this, and firms intending to move out should have to inform the local authority beforehand. New office buildings at Birmingham under construction or approved, it is pointed out, look like adding 40,000 office jobs in the city in the next ten years. This is far too big an increase. The Government is urged to give immediate attention to this problem of the fast growth of office employment.

Regional Plan Advocated

The Minister of Housing and Local Government should formulate or commission a broad regional plan to guide development over the next twenty years. Co-ordination of aims at the highest level is urgently necessary so that a comprehensive Government policy may result. This is the first prerequisite of an effective development programme for the West Midlands region.

Board of Trade refusal of industrial development certificates, it is stated, hinders the success of many 'overspill' schemes, while the Ministry of Transport's motorways policy seems certain to stimulate further growth in the already over-developed London-Liverpool axial belt.

Ministry's Plan Condemned

'Negation of Planning'

AT A MIDLAND conference of civic societies at Leamington on October 14 a new plan by the Ministry of Housing and Local Government to accommodate Birmingham and West Midland overspill by the building of at least 100,000 houses beyond the green belt was disclosed by the vice-chairman of the Midland New Towns Society, Mr. J. C. Cadbury, and the secretary, Dr. D. E. C. Eversley.

DR. EVERSLEY produced a copy of a letter which he said was the first indication of the plan and which had been sent to the Clerks of Warwickshire, Worcestershire and Staffordshire County Councils by the Ministry of Housing. The letter, he said, stated that despite current proposals, including a new town and the expansion of some existing towns, at least 100,000 more dwellings would be required to solve the overspill problem of Birmingham and the West Midlands conurbation by 1981. Most of these houses would be built by private enterprise.

Dr. Eversley added that the letter asked each county to supply an appraisal of places outside the green belt which might acceptably be expanded with a rough assessment of the degree of possible expansion. Emphasising that this information should be supplied to the Ministry by November, the letter stated: 'It is suggested that a somewhat generous attitude towards the examination of potential building land be adopted.'

Dr. Eversley told the conference: 'The scheme is an absolute bombshell—the negation of planning. We shall oppose it vehemently and we hope it will also be opposed by the county councils concerned. These houses will be inhabited by people who are expected to commute across the green belt. We shall have a series of settlements right down the M 5, the new motorway from Birmingham to Tewkesbury.'

Implications Denied

Following the report of Dr. Eversley's remarks, the Ministry of Housing and Local Government stated, on October 16, that droves of commuters streaming across the green belt between Birmingham and sleepy villages would not be welcomed by the Ministry. It was emphasised that no decision had yet been made that would lead to that or to any breach of good planning standards that the former Minister, Mr. Henry Brooke, had insisted be maintained when land beyond the green belts was allocated for housing.

THE BUILDER CURRENT PRICES

THE information given on these pages has been specially compiled for *The Builder* and is copyright. It is the intention that the details given should indicate fair average prices of materials, not necessarily the highest or the lowest. The prices apply to large quantities of materials loaded at works, delivered at London Stations or at site in London Area as stated. Prices for smaller quantities ex merchant's warehouse will necessarily be higher so as to include the stocking and handling costs involved. It is recommended that the prices of materials should be confirmed by inquiry from suppliers and merchants.

AGGREGATES AND SAND

Delivered site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

		£	s.	d.
Pit Ballast	per yd.	1	5	5
Pit Sand	,,	1	3	8
Washed Sand	,,	1	6	9
¼ in. Shingle	,,	1	4	3
¼ in. Broken Brick	,,	1	0	9
Pan Breeze	,,	1	6	0
Fine or Coarse Foamed Slag Aggregate (2 yds. of fine and 2.6 yds. of coarse per ton.	per ton	3	8	0

CEMENT, etc.

Including non-returnable jute sacks or paper bags.

Best British Portland Cement. Standard Specification delivered Charing Cross area.

		£	s.	d.
8-ton loads and upwards, site	per ton	5	16	0
Below 8 tons down to 4 tons, site	,,	6	8	0
Below 4 tons down to 2 tons, site	,,	6	12	0
Below 2 tons down to 1 ton, site	,,	6	14	0
Rapid-Hardening Cement in 8-ton loads and upwards to site	,,	6	6	6
Below 8 tons down to 4 tons, site	,,	6	18	6
Below 4 tons down to 2 tons, site	,,	7	2	6
Below 2 tons down to 1 ton, site	,,	7	4	0

Aquacrete Water Repellent Cement. 32s. 6d. per ton on ordinary cement prices.

Sulphate Resisting Cement. 32s. 6d. per ton on ordinary cement prices.

Red, Buff or Khaki Colocrete in 8-ton lots	,,	8	16	0

Other colours according to colour.

In 4-ton lots from 313s. 3d. to 783s. 3d. per ton.

White Portland Cement	,,	14	0	9
Under 1 ton	per cwt.		17	0
417 Cement (Ultra Rapid Hardening) in 8-ton lots and upwards	per ton	7	8	6

Super Cement (Waterproof), 32s. 6d. per ton above Portland Cement.

Cullamix Tyrolean Finish, £11 13s.3d. to £14 8s.3d. (1-ton loads and upwards).

Ciment Fondu and Lightning Brands High Aluminous cement, 6-ton lots and up	,,	15	14	6
Stourbridge Fireclay, 6-ton loads at Railway Depot, London	,,	6	19	0
Stourbridge Fireclay, 6-ton loads (London sites)	,,	7	12	0
Moler Mortar Powder for Flue Bricks (London sites)	per cwt.	1	6	0

BRICKS

Full Loads		£	s.	d.
First Hard Stocks	per 1,000	16	19	6
Second Hard Stocks	,,	14	18	6
Mild Stocks (Kiln Burnt)	,,	11	5	0
Mild Stocks	,,	11	0	0

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.

2½ in. Nominal Fletton Bricks to sites in W.C. district :

Commons	,,	6	10	0
Cellular Commons	,,	6	10	0
Keyed do.	,,	6	12	0
Rustics	,,	8	12	0
Cellular Rustics	,,	8	12	0
Single Bullnose Commons	,,	8	14	6
Sandfaced	,,	9	12	0
Tuscans	,,	10	7	0
Saxons	,,	10	15	0
Golden Buffs	,,	11	2	0
Dapple Light Facings	,,	11	9	6
Heather Facings	,,	11	5	0
Best Blue Pressed Staffs (London sites)	,,	34	0	6
do. Bullnose (London sites)	,,	34	19	6
Blue Wire Cuts (London sites)	,,	29	19	6
Midhurst Lime Bricks (London sites)	,,	11	16	6
Uxbridge Whites (London sites)	,,	12	3	6
Special Purpose Sandlime Bricks (London sites)	,,	9	2	0

Best Stourbridge Fire Bricks :

2½ in. (London sites)	,,	33	6	9
3 in. (London sites)	,,	40	0	0
2¾ in. Moler Flue Bricks (London sites)	per 1,000	31	0	0
2½ in. Machine-made Sandfaced Red Facings (London sites)	,,	18	19	0
2½ in. Machine-made Multi Red Facings (London sites)	,,	19	4	0
2½ in. Hand-made Sandfaced Red Facings (London sites)	,,	20	17	6
2½ in. Hand-made Sandfaced Multi-Colour Facings (London sites)	,,	20	17	6
Hand-made Sandfaced Cherry Red Facings, Berkshire district (London sites)	,,	21	5	0
Hand-made Sandfaced Multi-Colour Facings, Berkshire district (London sites)	,,	21	5	0
Rubber Bricks for gauged arches (London sites)	,,	52	5	0
2½ in. Surrey Clamp Burnt Multi Stock Facings (London sites)	,,	16	15	0
2½ in. Surrey Kiln Burnt Multi Stock Facings (London sites)	,,	18	7	6

Glazed Bricks (London sites), White, Ivory, Brown:

Stretchers	,,	64	0	0
Headers	,,	63	0	0
Quoins, Bullnose and 4½ in. Flats	,,	80	0	0
Double Stretchers	,,	85	0	0
Double Headers	,,	77	10	0
One side and two ends	,,	87	0	0
Two sides and one end	,,	89	10	0
Splays and Squints	,,	83	0	0

Cream and Buff, £3 extra over White. Other colours, hard glaze, £8 10s. 0d. extra over White. All above prices plus 47½% for Best quality and plus 47½% less 10% for Second quality.

PARTITION SLABS, etc.

Delivered Central London Area. (W.C. District).

HOLLOW CLAY PARTITION BLOCKS (Keyed)

Minimum lorry loads

		£	s.	d.
*2½ in. 140 yds.	per yd. sup.		4	7

BUILDING BLOCKS (Keyed)

*3 in. (6 cavity) 110 yds.	,,		5	9
*4 in. (6 cavity) 90 yds.	,,		7	3
6 in. (8½ in. × 5½ in.) 1,250 blocks	per 1,000	28	9	0

* Half blocks at no extra charge.

CLINKER CONCRETE

2 in. 100 yds.	per yd. sup.		4	0
2½ in. 85 yds.	,,		4	7
3 in. 75 yds.	,,		5	8
4 in. 55 yds.	,,		7	0

CRANHAM TERRA COTTA

2 in.	,,		7	5
2½ in.	,,		8	4
3 in. Load bearing quality	,,		9	6
4 in. do. do	,,		11	6

MOLER PARTITION BLOCKS

2 in. 150 yds.	,,		12	9
2½ in. 120 yds.	,,		13	9
3 in. 100 yds.	,,		14	9
4 in. 90 yds.	,,		17	0

LIGHTWEIGHT CONCRETE BUILDING AND PARTITION BLOCKS OF VARIOUS SOURCES OF MANUFACTURE

2 in. 100 yds.	per yd. sup.		5	4
2½ in. 80 yds.	,,		6	5
3 in. 65 yds.	,,		7	5
4 in. 50 yds.	,,		9	4
4½ in. 44 yds.	,,		10	2
6 in. 33 yds.	,,		14	5

THERMALITE-YTONG PARTITION BLOCKS

2½ in. 144 yds.	,,		7	0

THERMALITE-YTONG LOAD-BEARING INSULATING BLOCKS

3 in. 120 yds.	per yd. sup.		8	5
4 in. 90 yds.	,,		11	0
5 in. 72 yds.	,,		13	9
6 in. 60 yds.	,,		16	6
8½ in. 42 yds.	,,	1	3	8

FLOOR BLOCKS AND FILLER TILES

Floor Blocks 12 in. × 12 in. delivered in full lorry-loads :

3 in.	per 1,000	35	14	0
4 in.	,,	38	9	0
5 in.	,,	46	1	0
6 in.	,,	52	12	0
7 in.	,,	64	12	0
8 in.	,,	75	9	0
9 in.	,,	83	2	0
10 in.	,,	92	0	0

Filler Tiles in multiples of 10 tiles per 1,000 multiples :

12 in. × 3 in. × ¾ in.	,,	43	13	0
12 in. × 4 in. × ¾ in.	,,	75	7	0
10 in. × 5 in. × ¾ in.	,,	75	7	0

STONEWARE DRAIN PIPES, etc.

Glazed Stoneware Standard List (November, 1956).

		4 in.	6 in.	9 in.
Pipes, 2 ft. lengths	per ft.	1/8	2/6	4/6
Bends	each	5/–	7/6	20/3
Junctions	„	8/4	12/6	27/–
Gullies with 4 in. outlets	„	12/6	13/9	22/6

The following are the percentages to be added to the Standard List (November, 1956) prices delivered London Area.
Delivered ex Merchants Wharf or Depot.

	Over 2 tons	Over 100 pieces Under 2 tons	Under 100 pieces Under 2 tons
Best Quality ...	NET	+22½%	+27½%
BSS Best Quality...	+10 % NET	+10 %+22½%	+10 %+27½%
Tested Quality ...	+37½% NET	+37½%+22½%	+37½%+27½%
BSS Tested Quality	+47½% NET	+47½%+22½%	+47½%+27½%

		£	s.	d.
3 in. Land Drain Pipes (in 12 in. lengths)	per 1,000	12	10	6
4 in. do. do.	„	16	16	0
6 in. do. do.	„	34	10	0
9 in. do. do.	„	64	19	0

DAMP COURSE

		£	s.	d.
Hessian base bitumen 7 lb. per yd. sup. in 24 ft. rolls cut to wall widths in lots of £6 value and over delivered London area	per yd. sup.		3	11
Asbestos base do. 7 lb. per yd. sup.	do. do.		5	5
Lead lined bitumen do. 9½ lb. per yd. sup.	do. do.		12	4½
18 in. × 9 in. British damp course slates	per 1,000	43	8	11
14 in. × 9 in. do. do.	„	32	8	2
9 in. × 9 in. do. do.	„	18	18	9
18 in. × 4½ in. do. do.	„	19	19	9
14 in. × 4½ in. do. do.	„	15	18	3
9 in. × 4½ in. do. do.	„	10	14	3

STONE

		£	s.	d.
Bath Stone				
Monks Park	per ft. cube		10	3
St. Aldhelm Box Ground	„		11	6
Delivered in railway trucks at South Lambeth B.R. Western Region.				
Doulting Stone Random Blocks. Delivered London area	„		10	10
Beer Stone. Delivered London area	„		10	6
Portland Stone—				
Brown Whitbed in random blocks, 20 ft. average delivered in railway trucks at Nine Elms, B.R. Southern Region	„		9	10
Yorkshire Stone—Blue Robin Hood Quality. Delivered to site London in 6-ton lots.				
9 in. × 3 in. Rubbed, weathered, throated and stolled cills	per ft. cube	4	5	10
12 in. × 6 in. do. do. do.	„	3	1	2
12 in. × 3 in. Plain coping, twice throated	„	2	7	6
12 in × 3 in. Weathered and twice throated coping	„	3	3	3
14 in. × 6 in. do. do. do.	„	2	17	0
4½ in. × 9 in. Plinth rubbed on top and face ...	„	2	11	0
3 in. sawn two sides Slabs, random sizes	per ft. sup.		9	1
Templates and Cover Stones, 3 in., 4 in. and 6 in. thick, edges coped for rendered brickwork ...	per ft. cube	1	11	3
do. do. fair one edge for fair faced brickwork	„	1	17	0
Hard York—				
12 in. × 2 in. Square Steps, rubbed on top and edge	per ft. run		11	0
14 in. × 3 in. Round-nosed Steps, rubbed on top and front	per ft. cube	2	18	3
12 in. × 6 in. Plain Steps, rubbed top and front	„	2	11	0
2 in. Rubbed and Jointed Paving, given sizes ...	per ft. sup.		10	3
2 in. Sawn Paving, edges squared, in random sizes	per yd. sup.	3	12	0

TILES AND PANTILES

Delivered London area by road in 6 tons or over per 1,000.

	£	s.	d.
Machine-made Pantiles and French pattern Tiles from Lincolnshire district	35	16	6
Hand-made Pantiles Berkshire district	64	10	0
Hand-made Double Roman Bridgwater district	78	2	9
Hand-made 10½ × 6½ tiles Berkshire district	18	0	0
Machine-made 10½ × 6½ Staffordshire district	17	0	0
Hand-made Hip and Valley tiles per doz.	1	13	0
Machine-made Hip and Valley tiles do.	1	12	0
Concrete tiles 10½ × 6½	8	10	0
do. Interlocking (49S)	19	16	6

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES

First-quality Slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate station. Per 1,000 actual.

	£	s.	d.
24 × 12	160	4	0
22 × 12	126	15	0
22 × 11	114	15	0
20 × 12	107	5	0
20 × 10	105	0	0
18 × 10	71	5	0
18 × 9	62	14	0
16 × 10	54	15	0
16 × 8	42	18	0

NOTE.—Breakage in transit, purchasers' responsibility.

TIMBER

		Ex		£	s.	d.
Softwood			per			
Joinery quality		Wharf	standard	£115 to £140		
Carcassing quality		do.	„	£94 — £98		
1 in. Tongued and Grooved Flooring		do.	„	£112	0	0
Hardwood				£	s.	d.
Mahogany—African S.E.		do.	per ft. cube	1	17	6
do. Honduras S.E.		do.	„	3	5	0
Oak European S.E.		do.	„	2	10	0
do. Japanese S.E.		do.	„	3	0	0
do. English Logs sawn ...		do.	„	2	0	0
Teak 8 in. average S.E. ...		do.	„	3	17	6
Walnut African Logs sawn ...		do.	„	1	2	6
Plywood			per			
6 mm. (¼ in.) Birch Plywood B/BB			100 sq. ft.	4	3	6
6 mm. Israeli Gaboon do. B/BB exterior grade WBP (AX100)			„	4	5	3
18 mm. Birch Blockboard			„	9	7	0
¾ in. Douglas Fir Plywood 96 in. × 48 in. Exterior grade WPB (AX100) solid two sides			„	9	3	0

DOORS (in Lots I-II)

		£	s.	d.
Delivered London area.				
1¼ in. 4 Horizontal Panel. Pattern 4 in. deal				
2 ft. 0 in. × 6 ft. 6 in.	each	1	16	0
2 ft. 3 in. × 6 ft. 6 in.	„	1	17	6
2 ft. 6 in. × 6 ft. 6 in.	„	1	18	6
2 ft. 9 in. × 6 ft. 6 in.	„	2	0	6
2 in. do. but top panel open. Pattern 4 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	„	2	9	0
2 ft. 9 in. × 6 ft. 6 in.	„	2	11	6
2 in. 2 Panel top panel open. Pattern 2 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	„	2	3	0
2 ft. 9 in. × 6 ft. 6 in.	„	2	5	0
1¾ in. Plywood Faced Flush Doors to BS459, Part 2A				
2 ft. 0 in. × 6 ft. 0 in.	„	1	12	3
2 ft. 0 in. × 6 ft. 6 in.	„	1	12	3
2 ft. 3 in. × 6 ft. 6 in.	„	1	13	9
2 ft. 6 in. × 6 ft. 6 in.	„	1	15	3
2 ft. 9 in. × 6 ft. 6 in.	„	1	18	0
1¾ in. Hardboard Faced Flush Doors				
2 ft. 0 in. × 6 ft. 0 in.	„	1	5	6
2 ft. 0 in. × 6 ft. 6 in.	„	1	6	0
2 ft. 3 in. × 6 ft. 6 in.	„	1	6	6
2 ft. 6 in. × 6 ft. 6 in.	„	1	8	6
2 ft. 9 in. × 6 ft. 6 in.	„	1	9	6

SUNDRIES

		£	s.	d.
Delivered London area.				
1 in. Wood Wool Slabs 6 ft. 0 in. × 2 ft. 0 in. in quantities of 1 ton (89 yds. to 1 ton)	per yd.		6	2
1½ in. do. (67 yds. to 1 ton)	„		8	0
2 in. do. (52 yds. to 1 ton)	„		9	9½
2½ in. do. (45 yds. to 1 ton)	„		11	3
3 in. do. (39 yds. to 1 ton)	„		12	7½
½ in. imported or home produced insulation Board, quantities over 5,000 sq. ft.	per 100 sq. ft.	2	2	6
¼ in. Hardboard do.	„	1	17	6
⅛ in. do. do.	„	2	4	6
2 in. Compressed Straw Slabs, roofing quality. 6 ft., 8 ft., 9 ft., 10 ft., and 12 ft. × 4 ft.				
50–100 yds.	per yd. sup.		11	4
101–250 yds.	„		10	10
251–750 yds.	„		10	1
Over 750 yds.	„		9	4
2 in. do. for partitions 4d. per yd. cheaper.				
⅛ in. Asbestos Flat Building Sheets...	„		4	3½
¼ in. do. do. do.	„		6	0
Roofing Felt 1-ply	„		1	9
do. 2-ply	„		2	2½
Best Scotch Glue in slabs	per ¼ cwt.	5	3	9
do. pearl	„	5	3	9
Croid Glue	28 lb.	2	6	0
Impact Adhesive	per gall.	2	12	0
Cut Nails 3 in. (1-ton lots)	per ton	84	10	0
do. 4 in. and up (1-ton lots)	„	81	0	0
Wire Nails 3 in. (4-cwt. lots)	per cwt.	4	2	1
do. 4 in. and up (4-cwt. lots)	„	3	19	3

METALS

STEEL JOIST, ETC.

		£	s.	d.
Basis Joists—				
6 in. × 5 in., 8 in. × 5 in., 8 in. × 6 in., 10 in. × 6 in., 12 in. × 6 in., plain cut to lengths delivered London area	per ton	47	15	0
Extra for sizes				
3 in. × 1½ in. 4 in. × 1½ in.	„	3	10	0
3 in. × 3 in.	„	2	10	0
4 in. × 3 in.	„	2	5	0
10 in. × 4½ in.	„	1	10	0
5 in. × 2½ in. 5 in. × 3 in.	„	1	15	0
4½ in. × 1½ in.	„	3	5	0
5 in. × 4½ in. 7 in. × 3½ in. 13 in. × 5 in. ...	„		15	0
6 in. × 3 in. 24 in. × 7½ in.	„	2	0	0
6 in. × 4½ in. 7 in. × 4 in. 8 in. × 4 in.	„	1	5	0
9 in. × 4 in. 10 in. × 5 in.				
12 in. × 5 in. 22 in. × 7 in.	„	1	0	0

METALS—*continued*

		£ s. d.
9 in. × 7 in. 10 in. × 8 in. 12 in. × 8 in.		
14 in. × 5½ in. 14 in. × 6 in. 14 in. × 8 in.	per ton	10 0
15 in. × 5 in. 15 in. × 6 in. 16 in. × 6 in.		
16 in. × 8 in. 18 in. × 6 in. 18 in. × 7 in.	"	10 0
18 in. × 8 in. 20 in. × 6½ in. 20 in. × 7½ in.		
Steel angles average price	"	48 15 0
Steel tees average price	"	49 15 0
Fabricated work delivered London—		
R.S. Joists cut and fitted...	"	67 19 0
Compound girders	"	72 14 3
Stanchions	"	78 9 9
Compound stanchions	"	83 4 3
In Roof Work—Trusses and Purlins	"	93 19 6
Average prices not for awkward work.		
Angle cleats and ⅜ in., ½ in. and ⅝ in. bolts average price London area	per cwt.	5 10 0

Above prices joists etc. increased by 1·1%.

Ferro-Concrete Bars and Fabric

		£ s. d.
Mild Steel Ferro-Concrete Bars British manufacture to BSS 785 ex. Mills. 1 in. diameter and upwards delivered nearest London station ...	per ton	40 10 0
do. do. ex. London Stock do. delivered London site	"	49 10 0
Extras—		
¼ in. diam....	per ton extra	8 12 6
⅜ in. do.	"	6 12 6
½ in. do.	"	4 12 6
⅝ in. do.	"	3 2 6
¾ in. do.	"	1 10 0
⅞ in. and 1 in. diam.	"	15 0

Above prices mild steel bars increased by 1·1%.

		£ s. d.
Steel wire mesh reinforcing fabric to BSS 1221A.		
Ref. No. 106 ... ... 7.88 lbs.	per sq. yd.	5 2½
" " 109 ... ... 4.71 "	"	3 0½
" " 113 ... ... 1.83 "	"	1 8½
" " 122 ... ... 7.32 "	"	4 10½
" " 125 ... ... 4.32 "	"	2 10½

Mild Steel Tubes

Tubes to BSS 1387. Fittings BSS 1740.

Basic List Prices

	per ft. / each	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Tubes	per ft.	9½	10	1/–	1/2½	1/9	2/3	2/8	3/9
Bends	each	1/7	1/9	2/–	2/6	3/8	5/5	6/2	10/7
Elbows, square	"	1/8	1/10	2/2	2/6	3/–	4/4	5/2	8/6
do. round	"	1/10	2/–	2/4	2/10	3/4	4/8	5/8	9/4
Tees	"	2/–	2/2	2/6	3/2	3/8	5/–	6/2	10/2
Crosses... ...	"	4/4	4/8	5/6	6/6	8/2	11/–	13/2	21/–
Sockets, Plain	"	6	6	8	10	1/–	1/4	1/9	2/6
do. Diminished	"	8	10	1/–	1/2	1/6	2/–	2/8	4/–
Backnuts ...	"	4	4	6	7	10	1/–	1/4	2/2

Malleable Fittings

	each	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Elbows, round	each	8½	8½	9½	1/2½	1/8½	2/7½	3/6	5/–
Tees	"	9½	9½	1/–	1/4½	2/–	2/9½	4/–	5/6
Crosses... ...	"	1/2½	1/2½	1/4½	2/–	2/9½	3/7½	5/2½	7/2½
Sockets... ...	"	5½	5½	7	9½	1/–	1/7½	2/2½	3/1½
Backnuts ...	"	3	3	3½	4½	5½	7½	10½	1/5½

Discounts from List prices as follows :—

Galvanised Tube—

	Under 1 ton	Over 1 ton
Light	−37 %	−38½%
Medium	−33 %	−34½%
Heavy	−25½%	−27 %

Black—

	Under 1 ton	Over 1 ton
Light	−47 %	−48½%
Medium	−43 %	−44½%
Heavy	−35½%	−37 %

W.I. Fittings

Light	−24½%
Heavy	−20½%

Malleable Fittings

Malleable List	−14%+40%

Black—

Light	−30½%
Heavy	−26½%

Malleable List −14%

C.I. Half-Round Gutters

Delivered London per yd. in 6 ft. lengths.

	Gutters	Nozzles	Stop Ends
3 in.	4/4½	3/10	1/1
3½ in.	4/9	4/2	1/1
4 in.	6/1½	4/9	1/8
4½ in.	6/9	5/4	2/–
5 in.	7/6	5/9	2/4

C.I.O.G. Gutters

Per yd. in 6 ft. lengths :

	Gutters	Nozzles	Stop Ends
3 in.	5/7½	5/1	1/4
3½ in.	6/3½	5/1	1/8
4 in.	6/11½	5/4	2/–
4½ in.	7/6	6/1	2/4
5 in.	8/2½	7/–	2/8

C.I. Rain-Water Pipes

	Pipes	Bends	Branches
2 in.	9/4	4/9	6/10
2½ in.	9/4	5/4	9/2
3 in.	10/6	6/8	9/11
3½ in.	11/10	7/10	11/11
4 in.	13/9½	9/6	14/2

L.C.C. Coated Soil Pipes

2 in.	10/7 8/2 9/11
2½ in.	11/2 9/1 12/4
3 in.	12/6½ 9/11 14/8
3½ in.	14/–½ 12/4 17/1
4 in.	15/11½ 13/10 20/3

Above prices for gutters, rain-water and soil pipes for under 5-cwt. lots only. Lots over 5 cwt. see List No. 3300, dated February 1, 1955, plus 32½% and tonnage allowance. 4-ton lots 5%. 2-ton lots 2½%.

L.C.C. Coated Drain Pipes

	£ s. d.
4 in. diameter in 9 ft. lengths ... ... per yd. run	1 11 1
6 in. do. do. ... ... "	2 5 6
4 in. diameter bends ... ... each	1 0 6
6 in. do. do. ... ... "	2 14 9
4 in. diameter branches ... ... "	1 16 6
6 in. do. do. ... ... "	4 7 6

Above prices for any quantity but under 5 cwt. carriage extra.

Pitch Fibre Drain Pipes

	£ s. d.
2 in. diameter in 5 ft., 5 ft. 6 in. or 8 ft. lengths including couplings ... ... per ft. run	1 6½
3 in. do. ... ... "	1 10½
4 in. do. ... ... "	2 6
5 in. do. ... ... "	4 1½
6 in. do. ... ... "	5 0½
4 in. diameter short radius ¼ bends ... ... each	17 9
4 in. do. do. ⅛ bends ... ... "	12 11
2 in. diameter 6 ft. radius bends (5 ft. lengths) "	17 0
3 in. do. do. do. "	19 8
4 in. do. do. do. "	1 7 4
5 in. do. do. do. "	2 4 0
6 in. do. do. do. "	2 14 6

Above prices for loads of £60 and over.
Loads £25 to £59 19s. 11d. Plus 10%
Loads under £25 ... Plus 15%

Asbestos Rain-Water Pipes and Fittings

All less 17½% discount.

	per yd. / each	2 in.	2½ in.	3 in.	4 in.
Pipes, 6 ft. lengths ...	per yd.	4/7	4/10½	5/11	7/10
Shoes	each	3/–	3/3	3/10	5/2
Single Branches	"	4/8	5/6	6/7	9/2
Bends, squares or obtuse ...	"	3/3	3/7	4/8	6/7
Swan Necks, 4½ in. proj....	"	3/7	4/8	5/2	7/3
do. 6 in. do. ...	"	3/10	5/2	5/10	7/10

Asbestos O.G. Gutters and Fittings

	per yd. / each	4 in.	4½ in.	5 in.	6 in.
Gutters, 6 ft. lengths ...	per yd.	4/4	4/9½	5/9	6/10½
Drop ends	each	3/6	4/–	4/9	5/5
Stop ends	"	1/1	1/2	1/3	1/5
Angles	"	3/7	4/1	5/–	5/10
Nozzles	"	3/6	4/–	4/9	5/–
Union Clips	"	1/9	2/1	2/6	2/11

Asbestos Half-Round Gutters and Fittings

	per yd. / each	3 in.	4 in.	4½ in.	5 in.	6 in.
Gutters, 6 ft. lengths	yd.	3/0½	3/7½	3/8½	4/4½	6/1
Drop ends	each	2/6	3/–	3/3	3/7	5/2
Stop ends	"	1/–	1/1	1/2	1/3	1/5
Angles	"	2/10	3/3	3/7	3/10	5/2
Nozzles	"	2/6	3/–	3/3	3/7	5/2
Union Clips ...	"	1/3	1/4	1/5	1/7	2/5

Per ton basis in London

	£ s. d.
Iron—Staffordshire Crown Merchant Quality	52 17 6
Mild Steel Bars	47 18 0
Mild Steel Hoops	49 10 0

Ex Merchant's Stock per ton Two-ton lots

	£ s. d.
Soft Sheets C.R. and C.A.—	
20 gauge	63 0 0
24 gauge	65 10 6
26 gauge	68 11 0
Galvanised Corrugated Sheets, 6-ft. to 9-ft.—	
20 gauge	70 18 0
24 gauge	74 9 0
26 gauge	79 15 0
Galvanised Flat Sheets C.R. and C.A.—	
20 gauge	72 8 6
24 gauge	75 19 0
26 gauge	81 5 0

ALUMINIUM AND ALUMINIUM ALLOYS

(Base Prices)		£ s. d.
Sheet BS 1740 S1C 18 SWG (36 in. wide)... ...	per lb.	3 0½
Sheet BS 1470 NS3 Utility 18 SWG (36 in. wide)	"	2 11½
Coiled strip BS 1470 S1C 18 SWG (24 in. wide)	"	2 11½
Coiled strip BS 1470 NS3 Utility 18 SWG (24 in. wide)...	"	2 11
Coiled strip high purity, 22 SWG (12 in. wide)	"	3 2
Corrugated sheet BS 1470 NS3 Circular Profile 8 ft. × 32 in. × 20 SWG	per sheet	1 14 1
Corrugated sheet BS 1470 NS3 Industrial Profile 8 ft. × 31½ in. × 20 SWG	"	1 19 10
Corrugated sheet BS 1470 NS3 Mansard Profile 8 ft. × 31½ in. × 20 SWG	"	1 13 1
Extruded section BS 1476 E1C simple moulding	per lb.	2 10½
Extruded section BS 1476 E1C 1 in. diam. round	"	2 8
Extruded section BS 1476 HE19WP simple angle	"	3 2
Extruded section BS 1476 HE19WP 1 in. diam. round	"	3 1
Tubing BS 1471 T1C 1½ in. O/D × 20 SWG ...	"	4 8
Tubing BS 1471 HT19WP 1½ in. O/D × 20 SWG	"	6 3

PLUMBERS' BRASS WORK, etc.

Delivered in London area.

All per dozen	B.S.S. ¼ in.	⅜ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdown bib cocks Crutch head for iron...	87/–	128/–	—	—	—	—
Toilet bib cocks for iron ...	109/–	158/5	—	—	—	—

PLUMBERS' BRASS WORK, etc.—*continued*

All per dozen	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdownstopcocksforiron	66/-	95/9	188/-	363/-	522/6	917/6
do. with two unions for lead	89/-	132/-	234/4	472/-	623/6	1,389/6
Double nut boiler screws ...	18/8	26/5	47/6	48/6	67/-	93/6
Heavy Croydon ball valves	77/-	193/6	312/5	568/8	734/10	—
Plumbers' union brass lead to iron	19/6	23/6	38/6	52/10	70/6	165/-
	1½ in.	1¾ in.	2 in.	3 in.	3½ in.	4 in.
Caps and Screws	33/-	40/8	59/6	92/5	118/10	155/3
Brass Sleeves	—	31/11	31/11	56/2	74/10	91/5
		1½×6 lb.	1½×6 lb.	2×7 lb.		3×7 lb.
Lead P. trap with brass cleaning screws		68/6	85/6	137/-		233/9
Lead S. trap do. do.		82/9	102/9	168/3		302/3

Solder :			s.	d.
Plumbers' ...	1 cwt. lots	320/-	14 lb. lots per lb.	3	7
Tinmen's	" "	404/-	" " "	4	5
Blow pipe ...	" "	407/-	" " "	4	6

Copper Tubes and Sheets

Copper tubes BSS 659/1944 on the basic price of 27½d. per lb. plus gauge and manufacturing extras as follows. Minimum quantities, 10 cwt.

	Extra d.		d.		d.
¼ in. × 19 gauge	16¼	Total per lb.	43¾	Approx. per ft.	11¾
¾ in. × 19 "	14¾	" "	42	" "	16½
1 in. × 18 "	12½	" "	40½	" "	25
1¼ in. × 18 "	12¼	" "	39¾	" "	30¼
1½ in. × 18 "	12¼	" "	39¾	" "	36¼
2 in. × 17 "	13¾	" "	41½	" "	58

Small Quantity extras :

10 cwts. to 5 cwts.	plus ½d. per lb.
5 cwts. to 2 cwts.	" 1d. "
2 cwts. to 1 cwt.	" 2d. "

	£	s.	d.
Rolled Copper sheets up to 48 in. wide, basic price plus gauge and manufacturing extras	267	10	0

Zinc

		£	s.	d.
Sheet Zinc, 10 gauge (25 SWG), 5 cwt. lots upwards	per cwt.	8	6	6
" " 12 gauge (23 SWG), " " "	"	8	4	0
" " 14 gauge (21 SWG), " " "	"	8	2	9

Brass Tube

Brass tubes, basic price, plus gauge and manufacturing extras	per lb.	1 10

LEAD SHEET AND PIPES

Basis selling price to one address in London or Home Counties :

		£	s	d.
Lead Sheet, English, 3½ lb. substance and upwards	per ton	101	0	0
" Water Pipe, in coils	"	103	5	0
Lead Soil Pipe, 10 ft. or over 2 in. to 4 in. in dia.	"	104	15	0
" " " over 4 in. dia.	"	106	15	0
" Gas or Untinned Compo pipe...	"	104	15	0

5 cwt. lots and over less 6d. per cwt. off basic prices.

Extras over Basis for quantities under 5 cwt. :

3 cwt. and under 5 cwt.	per cwt.	4	0
1 cwt. do. 3 cwt.	"	6	0

Smaller quantities than 1 cwt. priced specially.

Supplying sheet lead and lead pipes to less than basis weights and cutting to sizes less than basis charged extra according to current trade schedule.

Allowance for Old Lead, collected, £53 0s. 0d. per ton weighed at buyer's works.

PLASTER, etc.

		£	s.	d.
Coarse Pink in 1-ton loads and over delivered on site	per ton	8	15	0
do. White do. do. do.	"	9	4	9
Sirapite Coarse BSS 1191 Class C	do.	9	6	9
do. Fine do. do.	do.	9	14	9
do. Browning BSS 1191 Class B	do.	9	6	9
do. Board Finish	do.	9	6	9
Blue Lias Lime, in 6-ton loads	"	6	17	6
Hydrated Lime (Grey) in 6-ton loads	"	6	2	0
do. (White) do.	"	6	12	0
Lump Lime (Grey) do.	"	5	19	0
do. (White) do.	"	6	6	6
White Keen's or Parian Cement, in 1-ton loads ...	"	12	13	0
Pink Keen's or Parian Cement, in 1-ton loads ...	"	12	7	9
Granite Chips, in 6-ton loads	"	2	6	9
Hair	per cwt.	4	17	6
Gypsum Plaster Lath or Base Board, ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	per yd.	2		2½
1,200 yds.	"	2		1½
do. Insulating do. ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	"	2		8
1,200 yds.	"	2		7
Gypsum Plaster Wall Boards, 3 and 4 ft. wide 6 to 12 ft., ½ in. thick, 600 yds. and over in one delivery. Delivered site	"	2		5½
1,200 yds.	"	2		4½
do. Insulating do. ½ in. thick, 600 yds. and over in one delivery. Delivered site	"	2		11
1,200 yds.	"	2		10

PAINTS AND DISTEMPER

Delivered London area.		£	s.	d.
Ceiling Distemper	per cwt.	1	7	6
Washable Distemper	"	5	18	0
Gloss Paint	per gal.	2	18	0
Super Snowcem cement paint (in 1 cwt. drums) ...	per cwt.	5	0	0

Lead Products and Oils

		£	s.	d.
Ground White Lead, in 1 cwt. kegs	per cwt.	8	7	6
Genuine White Lead Paint, 1-19 gal. lots in 1 gal. tins	per gal.	3	6	6
Genuine Red Lead, Dry, (1 cwt. lots)	per cwt.	6	17	0
Genuine Linseed Oil Putty, 1 cwt. keg	"	2	13	6
Size XD quality 28 lb.	per tin		9	0
Raw Linseed Oil (5 gal.) drums extra	per gal.		16	9
Boiled Linseed Oil (5 gal.) do.	"		17	8

Sundries

Turpentine substitute (5 gal.) drums extra ...	"		5	4½
do. do. (40 gal.) do.	"		4	8½
Solignum, Brown (5 gal. cans) Exterior	"		10	0
Creosote (40 gal. barrels)	"		2	3
Paste Powder (1 lb. packets)	per lb.		2	4
White Lining Paper	per piece		1	4

VARNISHES, etc.

Delivered London area.		£	s.	d.
Oak Varnish, Outside or Inside	per gal.	2	0	0
Oak, Pale Copal do. do.	"	2	0	0
Hard Drying Oak for Inside	"	2	5	0
Crystal Paper Varnish do.	"	2	8	0
Eggshell Flat Varnish do.	"	2	2	0
Finest Carriage Varnish	"	2	7	0
Front Door Varnish	"	2	4	0
Japan Gold Size	"	1	12	0
Black Japan	"	1	16	0
Brunswick Black	"	1	12	0
Berlin Black	"	1	10	0
Terebene	"	1	12	0
Knotting (1 gal. bottles free)	"	1	15	0
French and Brush Polish (do.)...	"	1	15	0

GLASS

Delivered London area.		s.	d.
18 oz. Sheet Glass Ordinary Glazing Quality— Cut Sizes...	per ft. sup.		10
24 oz. do. do. do. do.	"	1	0½
26 oz. do. do. do. do.	"	1	3
32 oz. do. do. do. do.	"	1	7½
⅛ in. Rolled Plate...	"	1	3½
3/16 in. Rolled and Rough Cast	"	1	6½
¼ in. do. do.	"	1	7½
⅛ in. Figured Rolled and Cathedral, Standard patterns— White Group 1	"	1	3½
do. Group 2	"	1	9½
do. Standard Tints	"	2	1½
do. Special Tints	"	7	3
⅛ in. Pinstripe, Hammerstripe, Reeded, Reedlyte and Luminating Group 3	"	1	8½
¼ in. Wired Cast up to 50 in.	"	1	10½
¼ in. do. do. 50 in. to 72 in.	"	2	2½
¼ in. Georgian Wired Cast	"	1	11
Hollow Glass Blocks— P.B.2 Cross reeded 5½×5½×3⅞ in.	each	3	9
P.B.3 Broad reeded 7½×7½×3⅞ in.	"	5	9
P.B.32 Cross reeded 7½×7½×3⅞ in.	"	5	9
P.B.4 Prismatic 7½×7½×3⅞ in.	"	6	6
P.B.5 Flemish 7½×7½×3⅞ in.	"	5	9
P.B.6 Boomerang 7½×7½×3⅞ in.	"	6	6
Half Size Blocks— P.B.32 Cross reeded 7½×3¾×3⅞ in.	"	4	10
Radiused Corner Blocks to match up with— P.B.2 Cross reeded	"	8	1
P.B.3 Broad reeded	"	9	8
P.B.32 Cross reeded	"	9	8
P.B.2, P.B.3, P.B.32 are also supplied in Light Diffusing Blocks at same price.			
¼ in. Polished Plate Glass, G.G. quality— In plates not exceeding 2 ft. sup.	per ft. sup.	4	7
" " " 5 ft. sup.	"	5	7
" " " 45 ft. sup.	"	7	6
" " " 100 ft. sup.	"	7	6
¼ in. Polished Plate, extra sizes, i.e., plates exceeding 100 ft. sup. or 160 in. one way or 96 in. both ways. G.G. quality—Not exceeding 135 ft. sup. or 240 in. one way or 130 in. both ways ...	"	11	4
Not exceeding 180 ft. sup. or do.	"	15	0

Plates exceeding 180 ft. sup. prices on application.

Substances other than ¼ in. Polished Plate at Special Prices.

Quantity Tariff—Sheet and Sundry Glass.

The following prices apply to minimum quantities of one size and one pattern delivered by the manufacturer to one site at one time.

Description of Glass—	Minimum quantity	per ft. sup. s.	d.
18 oz. sheet O.Q.	3,000		7½
24 oz. " "	2,000		9½
26 oz. " "	2,000		11½
32 oz. " "	2,000	1	3½
⅛ in. Rolled Plate...	1,000		10½
⅛ in. Figured Rolled and Cathedral Standard Patterns, White Group 1	1,000		10½
do. Group 2	1,000	1	2½
⅛ in. Pinstripe, Hammerstripe, Reeded, Luminating and Spotlyte Group 3	1,000	1	2½
3/16 in. Rolled Plate or Rough Cast	2,000	1	2
¼ in. do. do.	2,000	1	2½
¼ in. Wired Cast, Hexagonal up to 50 in. ...	2,000	1	5
¼ in. do. do. do 50 in. to 72 in. ...	2,000	1	9
¼ in. Georgian Wired Cast	2,000	1	5½

THE BUILDER RATES OF WAGES

AS FROM OCTOBER 2nd, 1961. (Every endeavour is made to ensure accuracy but we cannot be responsible for errors.)

1. Craftsmen and Labourers.

Region	Craftsmen	Labourers
	s. d.	s. d.
England & Wales (Grade A) ...	5 6	4 10½
London	5 7½	5 0
Liverpool and District ...	5 7½	5 0
Scotland... ...	5 6	4 10½

2. Apprentices.

Age	Per cent of Craft Rate	London and Liverpool Dist.	England, Wales (Grade A)
		s. d.	s. d.
15	25	1 5	1 4½
16	33½	1 10½	1 10
17	50	2 9½	2 9
18	62½	3 6½	3 5½
19	75	4 2½	4 1½
20	87½	4 11½	4 9½

3. Young Male Labourers.

Age	Per cent of Craft Rate	London and Liverpool Dist.	England, Wales and Scotland
		s. d.	s. d.
15	33½	1 8	1 7½
16	45	2 3	2 2½
17	66⅔	3 4	3 3
18	100	5 0	4 10½

NORTHERN IRELAND is not included; rates fluctuate so much from district to district that reference should be made to local offices.
WATCHMEN.—The rates per shift for watchmen engaged on building sites is 30s. 6d. in London and Liverpool District, and 29s. 3d. in the provinces.
FEMALE OPERATIVES.—In all districts throughout the country except in Scotland the rate of wages for women, aged 19 and over, engaged in craft processes is 4s. 7½d. per hour. Women engaged on work other than craft processes, 4s. 3½d. per hour. In Scotland the rate for the woman craftsman is 4s. 10½d. after a probationary period, and the woman labourer, 4s. 4½d.

New Companies

THE FOLLOWING NEW COMPANIES, registered in England, have been announced by Jordan and Sons, Ltd., company registration agents.

A. C. YATES & CO. (MONMOUTH) LTD.—Regd. Oct. 5, 1961. 12 Cathedral-rd., Cardiff. Secy.: Sylvia Yates. Bldg. contrs., etc. Nom. cap.: £500.

A. & E. BARNARD BROS. LTD.—Regd. Oct. 5, 1961. Bell-st., Princes Risborough, Bucks. Secy.: A. Barnard. Bldrs., etc. Nom. cap.: £12,000.

JOHN HISCOCK AND COMPANY LTD.—Regd. Oct. 5. 109 Commercial-rd., Swindon. Secy.: John R. L. Hiscock. To take over the bus. of 'F. & J. Collins,' cd. on at Swindon, Wilts, and to cy. on the bus. of bldrs., etc. Nom. cap.: £500.

LINDEN (BLDRS.) LTD.—Regd. Oct. 6, Sub.: D. M. Owen, 'Holly Cottage,' Brownhills-rd., Muckley Corner, Lichfield, Staffs. Nom. cap.: £500.

FRETCHFIELD & COMPANY LTD.—Regd. Oct. 6. Offices of Price & Riley, Aylmer-hse., Link Way, The High, Harlow, Essex. Secy.: Gladys E. Riley. To acq. lands or bldgs. and to develop the same as a bldg. estate, etc. Nom. cap.: £100.

H.P.E.B. LTD.—Regd. Oct. 6, 1961. Bldr. and decorator cd. on as 'H.E Biddle' at Crowborough, etc. Nom. cap.: £2,000. Dir.: Henry E. Biddle, Komiza, Glenmore-rd. east, Crowborough, Sussex.

J. F. LUCAS AND SONS LTD.—Regd. Oct. 6. 5 Bartholo Mews, Brighton. Secy.: Patricia I. Lucas. Bldrs., etc. Nom. cap.: £100.

JEATER, DEMPSEY & COMPANY LTD.—Regd. Oct. 6. 38 Harcourt-rd., N22. Secy.: D. E. G. Wing. Bldrs. & bldrs., mchts., etc. Nom. cap.: £100.

PROFICIENT BUILDERS LTD.—Regd. Oct. 9. 6 Surrey-st., WC2. Secy.: Stanley H. Lucas. Nom. cap.: £100.

R. H. MACE LTD.—Regd. Oct. 9. 7a Coppetts-rd., N10. Secy.: Arline A. Roberts. Bldrs., etc. Nom. cap.: £100.

J. MULHOLLAND (BUILDERS) LTD.—Regd. Oct. 9. 69 Wimpole-st., W1. Secy.: Shirley Hart. Nom. cap.: £100.

DAVID A. WALBANK (BUILDERS) LTD.—Regd. Oct. 9. 11 Windermere-rd., Great Horton, Bradford 7. Secy.: B. B. Baxter. Bldr. and contractor cd. on at Great Horton, Bradford 7, by David A. Walbank, etc. Nom. cap.: £1,000.

HAMER, THOMAS & CO. (BROCKWORTH) LTD.—Regd. Oct. 9. City-chmbrs., Clarence-st., Gloucester. Secy.: W. Thomas. Bldrs., plumbers, painters, etc. Nom. cap.: £10,000.

A. E. CHARMAN (LINGFIELD) LTD.—Regd. Oct. 10. Wilmington-hse., High-st., East Grinstead. Secy.: P. Hall. Bldrs., etc. Nom. cap.: £1,000.

L. JONES & CO. (FULHAM) LTD.—Regd. Oct. 10, 36 Chipstead-st., SW6. Secy.: L. W. Jones. Bldrs. and decorators mchts., etc. Nom. cap.: £1,000.

HEADLEY DEVELOPMENT CO. LTD.—Regd. Oct. 10. Knightsbridge-hse., Headley, Newbury, Berks. Secy.: J. W. Pritchard. Bldrs., etc. Nom. cap.: £5,000.

JOHN KERRY & CO. LTD.—Regd. Oct. 10. 35 Windmill-st., W1. Secy.: J. J. Stansfield. Bldrs., etc. Nom. cap.: £1,000.

MID-WILTS CONSTRUCTION COMPANY LTD.—Regd. Oct. 10. 89 London-rd., Leicester. Secy.: J. W. Jackson. Nom. cap.: £2,000.

E. POTTERTON (BUILDERS) LTD.—Regd. Oct. 11, 1961. 16 Upton-ave., Cheadle Hulme, Ches. Secy.: E. Potterton. Nom. cap.: £100.

LAMASA BUILDERS LTD.—Regd. Oct. 12. 713/4 Imperial-hse., Kingsway, WC2. Secy.: Shirley Hart. Nom. cap.: £100.

Recent British Trade Marks

THE FOLLOWING PARTICULARS, which are extracted from the 'Trade Marks Journal,' are reproduced by kind permission of HM Stationery Office. The 'Trade Marks Journal' may be obtained from the Patent Office, annual subscription £5.

POLYFLECK.—B816515. Paints, varnishes, enamels, painters colours, distempers, japans, lacquers, etc. Hangers Paints Ltd., Stoneferry Works, West Carr-lane, Hull.

DATEX.—820123. Roofing felts. D. Anderson & Son Ltd., Barton Dock-road, Stretford, Manchester.

UNIFAB.—820958. Internal partitions and wall panels, all for use in building and all having a facing of ceramic tiles. Richard Tiles Ltd., Woodland-street, Tunstall, Stoke-on-Trent.

POLYWALL.—822433. Paints, varnishes, distempers, japans, lacquers, etc. Corrosion Ltd., Warsash-road, Warsash, Hants.

CELLUTHERME.—810158. Structural units of concrete and floor screeds of concrete all for use in building. Sparkes Bros., Ltd., Spring-road, Feltham, Middlesex.

ROLOLITE.—815040. Material in sheet form made principally of plastics and for use in building construction. Filon Aktiengesellschaft, Seefeldstrasse 7, Zurich, Switzerland.

THERMAPOR.—820952. Concrete articles for buildings. Chester Concrete Co., Ltd., Pentre Works, Queensferry, Chester.

WOODPLAST.—B818956. Windows and window frames; doors and door frames and panelling; all the aforesaid goods being made of wood and having veneer facings of plastics. Melwood Thermoplastics Ltd., Willoughby-road, Harpenden, Herts.

POLYVILLA.—820285. Kits of parts sold complete for making up into prefabricated portable buildings. Polycell Products Ltd., 73 Highgate-road, NW5.

DURAGLAZE.—821251. Asbestos-cement sheets for building having a coating of non-combustible hard-baked silicone paint. L. Keizer (Technical Products) Ltd., Kingsborough-house, Wood-street, Kingston-on-Thames, Surrey.

POLYAZZO.—821983. Floors, floor making materials, wall panelling and wall tiles none being of metal. James Halstead Ltd., Crow Oak Works, off Radcliffe New-road, Whitefield, Manchester.

DAVLUX.—822563. Paints, varnishes and lacquers. Mark Davies Ltd., 118 Wilberforce-road, N4.

ALISPAN.—808690. Scaffolding boards made wholly or principally of non-metallic materials. Access Equipment Ltd., Maylands-avenue, Hemel Hempstead, Herts.

FORMALAM.—817965. Building materials included in Class 19. Holoplast Ltd., New Hythe, near Maidstone.

MACWALL.—B818001. Non-metallic building materials and articles included in Class 19 made therefrom; and concrete structures. J. T. Mackley & Co., Ltd., Shoreham-by-Sea, Sussex.

SOLARIS.—820489. Non-metallic trellis walls. Redland Tiles Ltd., Castle Gate, Castlefield-road, Reigate, Surrey.

PAKANDEK.—822825. Partitions for buildings; ceilings, roofing materials, wall boards etc., Packandeck Ltd., 207 Spon-lane, West Bromwich.

Reluctance to Tender

Doncaster to Extend Invitation List

DONCASTER education committee were told on October 16 that only three out of nine building firms on a selective tendering list for the construction of the £250,000 Hyde Park secondary school, were in fact prepared to tender. CLLR. BEN RAYNER said the rest were 'either too busy or the job is not big enough to interest them.'

CLLR. W. H. KELLY, chairman of the sites and buildings committee, said it would be essential to go outside the usual list of concerns. He was appointed to a sub-committee to take up the matter with Mr. L. J. Tucker, the Doncaster borough architect. The sub-committee was given powers to extend the invitation list.

TECHNICAL REVIEW

This Review of plant, equipment and materials—in most cases new or with new features—is intended to give brief details only of the products mentioned. Notices are based on data supplied by the manufacturers. Additional information and prices can be obtained either direct or by using the prepaid Readers' Service form which appears on page 142 of this issue. The form can be used for more than one inquiry.

1. Cranes

The increased use of modern tower cranes has emphasised the need for SAFETY DEVICES, not only to prevent overloading of the crane but also to give advance warning of excessive load or radius. Two new devices, a safe-load indicator and a constant-load limiter, are separate units which operate in conjunction with a common visual warning, audible alarm, and cut-out. The safe-load indicator is mounted on the main tie-bar that supports the jib by linking it to the top of the tower. It safeguards the crane against excessive loads and/or radius. Wired in parallel is the constant-load limiter, which is embodied in one of the hoist-rope pulleys, and provides protection against excess loads on the hoist-rope, irrespective of the radius. Both units include mechanical means for operating micro-switches which, as the safe working load is approached, give a preliminary visual warning and then an audible alarm before tripping the control circuits to safety.

After tripping has occurred, no outward travel of the crane's saddle or raising of the load is possible, but inward travel and lowering of the load can still be effected by the normal controls. As soon as the excess of load or radius is removed, all circuits are restored for normal working by use of the start control.

Babcock & Wilcox Ltd.,
7-12 Tavistock-square, London, WC1.

2. Ventilation

A new air-operated VENTILATOR FAN has the useful advantage of costing nothing to run whilst providing an efficient means of ventilation. It is made in clear polystyrene which, when fitted, does not obstruct daylight. The fan rotor runs on precision needle bearings which require no lubrication or other maintenance, whilst the non-ferrous shaft of the rotor allows the unit to be totally immersed in warm water for occasional cleaning. The fan, which is suitable for the home, office or factory, is silent in operation.

R. W. Simon Ltd.,
64-66 Millman-st., London, WC1.

3. Painting

At a recent demonstration an operator, using an airless PAINT SPRAY, covered the wall of a house 216 ft. sq. in a few minutes using only a simple hand shield by way of masking. The paint is pressurised by an air-operated pump and delivered from a 12-gallon drum to a lightweight gun through twenty-five feet of high-pressure nylon hose. It is then dispersed by the special design of the orifice in the tungsten carbide spray tip, which can be supplied in a variety of sizes. The power behind the jet, a fluid pressure of 2,000 psi, gives both good wetting of the surface and paint adhesion and ensures sealing of porous surfaces at the first application.

Two sides of the house were painted by one operator in under 12 minutes using the Kismatic spray

No air is used for atomisation as with compressed air spraying and it is, in fact, spraying by hydraulic pressure. This method enables a very fast rate of application to be maintained and should lead to a substantial reduction in labour costs. The whole equipment is mounted on a rubber-tyred trolley for mobility.

Kismet Ltd.,
Fenlake-rd., Bedford.

4. Heating

A feature of some recently introduced oil-fired AIR HEATERS is the light weight construction which allows easy roof mounting. This frees floor space for machines and operatives whilst ensuring even warm air distribution. The units can be used with single diffusers or in conjunction with ductwork having multiple outlets as a general heating system covering a wider area. The heaters can be automatically operated by time clock in accordance with the working hours and are designed to provide quick warmth —within minutes of switching on. A mobile version of the air heater is available for use where local warmth is required in one part of a large building or for emergency use of various descriptions. Heat outputs are 150,000-250,000 and 300,000-380,000 btu's per hour.

Nu-way Heating Plants Ltd.,
Droitwich, Worcestershire.

5. Temperature Control

A new appliance for improving central heating TEMPERATURE CONTROL in small bore domestic systems has recently been marketed. It allows, by means of a control knob, the temperature of the radiator system to be regulated independently of the domestic hot water supply. The unit consists of pump, mixing valve and by-pass, enclosed in a compact steel casing. The switch controlling the pump motor gives a ready means of switching the central heating on or off.

The setting of the valve is determined by the control knob which can be rotated through 180° from 'cold' to 'warm' giving a wide range of temperature control. With the setting in the 'warm' position, the temperature of the radiator circuit is at its maximum and is the same as the domestic supply, which may be determined by the setting of the boiler thermostatic control. With the main valve set in the 'cold' position, the by-pass is opened so that water delivered by the pump is returned directly to the radiator circuit, instead of going through the boiler, thus devoting the total heat output to the domestic supply. In the intermediate positions, the radiator temperature is controlled by varying the mixing of recirculated and freshly heated water passing through the radiator circuit.

A choice of four pump sizes is available to meet the varying load demands.

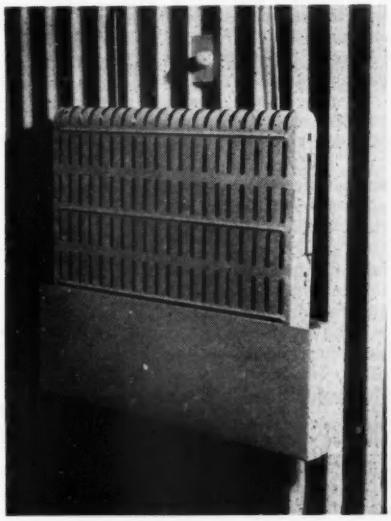
Sofono Electrical Division,
4 Stratford-place, London, W1.

6. Miscellaneous

Where dry air, either in shops or offices, is a problem, a HUMIDIFIER that can be used with all types of oil-filled and water-filled radiators has been put forward as a solution. Its method of application is simple, and consists of an inner casing containing a replaceable concertina filter of prepared paper, a water tank and water level indicator, the whole enclosed in a metal casing with a grid front. Water is poured into a lip incorporated in the outer casing until it reaches the full level mark on the indicator. As the water evaporates into the atmosphere so the tank is topped up when the level falls. The whole unit is suspended by hook clips, which are adjustable to suit all types of radiators whether panelled or open-front.

Townloc Engineering Co. Ltd.,
219 Blackfriars-rd., London, SE1.

A humidifier, for preventing dryness in the atmosphere, can be suspended unobtrusively from a radiator



News in Brief

Completion Date Exceeded

TWO MIDLAND building firms—one based in Birmingham and the other in Leamington—which have failed to complete contracts on time have had penalties imposed by Leamington Corporation. 'We are taking this action in an effort to avoid similar delays in future,' Mr. John Turner, Leamington housing manager said. Both firms are stated to have given shortage of materials and labour as reasons for their failure to keep to the time schedule, and one has blamed the 'appallingly bad weather last year.'

Sub-Agent's Award

MR. HOWARD WILLIAMS, sub-agent for John Laing Construction Ltd. on the erection of multi-storey blocks of flats for Bristol Corporation at Duckmoor-road, Ashton-gate, Bristol, has been awarded the London Association of Builders' Foremen and Clerks of Works Prize. Mr. Williams, who joined the company in 1958, served an apprenticeship as a carpenter/joiner.

Competition in Plastics Design

The British Plastics Federation is again this year organising a competition on behalf of the Worshipful Company of Horners to encourage young craftsmen to produce good designs in plastics. An award of 100 guineas is being offered for the most striking design for an article suitable for commercial production wholly or mainly of plastics. The competition is open to all those living in Great Britain or Northern Ireland who are under 35 years' old on December 1. Copies of the regulations and entry forms can be obtained from the British Plastics Federation, 47-48 Piccadilly, London, W1, to whom entries should also be sent. The competition closes on December 1 next.

Trade News

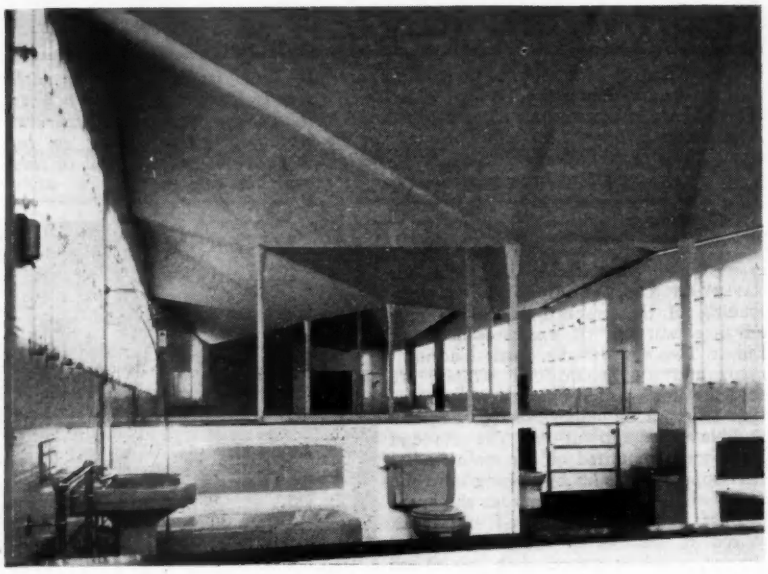
'Quality in Weatherproofing'

In 1958, The Ruberoid Co. Ltd., Commonwealth House, 1-19 New Oxford-street, London, WC1, produced a film entitled 'Quality in Weatherproofing.' It was shown to assist architects, builders, engineers and surveyors in the selection of Ruberoid specifications. The company has now decided to give it a fresh airing.

Scenes at the company's Brimsdown and Granton factories show supervision of every stage of the manufacturing process, with particular reference to the three different Ruberoid bases, asbestos, glass fibre and fibre felt. Technique is then described by a member of the contract division. The wide variety of surface finishes are illustrated followed by the methods of application to concrete and boarded substructures. The insulated metal deck roof is also examined in detail. The film ends with recapitulation shots of some of the main factors behind Ruberoid roofing recommendations.

Change of Address

THE RECORDAK DIVISION of Kodak Ltd. now operate from 246 High Holborn, London, WC1.



BUILDERS' MERCHANTS' SHOWROOMS, PADDINGTON: *Shown above is the ground-floor display of domestic sanitaryware and fittings, part of the complete reconstruction of showrooms at 22 Praed-street, W2, undertaken by Broad & Co., Ltd., the 80-year-old firm of builders' merchants and suppliers. The scheme (designed for the firm by Robin Dunn, DipArch, ARIBA, with James Gillis, FRICS, as consultant and with Peter Dunford, MSIA, responsible for display), has recast the whole of the extensive premises as showrooms for heating apparatus, non-domestic sanitary goods (including specialities for hospitals, schools and factories), cast-iron goods, and domestic sanitaryware and fittings; trade and retail counters backed by warehousing are also available in a total showroom area of 6,800 sq. ft. C. R. Price were the builders*

Personal Column

MR. W. H. DIAMOND has been appointed to the board of Braithwaite & Co. Structural Ltd.

Perstorp Products (Gt. Britain) Ltd., UK agents for Swedish Perstorp decorative plastic laminates, have appointed MR. GEORGE E. PATENALL as their chief area representative in the Midlands.

THE
BODDY
ROOFING
COMPANY LTD

Specialists in

ASBESTOS CEMENT
MATERIALS
PROTECTED METAL
ROOF INSULATION
SLATING
TILING

The principals and technical staff are available for consultation to architects, surveyors, structural engineers and contractors for any type or specification of roofing materials without obligation.

81 ESSEX RD • ISLINGTON
LONDON • N.1

Telephone: CANonbury 4281
(Private Exchange)

MR. HAROLD MARCUS has been appointed by Aygee Ltd. as its technical representative to the shopfitting industries.

MR. KENNETH M. KENT has been elected to the board of the Armstrong Cork Co. Ltd., of Kingsbury, London, NW9. MR. E. MALCOLM WOOD who has served as deputy managing director since 1956 succeeds Mr. Kent as managing director and chief executive officer of the company.

MR. SYDNEY FARMER, technical director of S. W. Farmer & Son Ltd., steel fabricators, London, SE13, has left for Australia on an intensive export drive. The company, which specialises in structural steelwork for the oil refinery and chemical industries, is linking up with an Australian firm of steel fabricators and a new company is being formed under the name of MONIER-FARMER PTY. LTD., Melbourne.

MR. G. M. WOLFE, chairman and managing director of Wolf Electric Tools Ltd., London, has left for Australia on a four weeks' business trip.

On an extensive trip covering three of the Group's main overseas markets, India, Africa and Australia, MR. A. F. BACON, director, Blundell-Permoglaze Ltd., left by Air India on October 23.

Company News

A trading agreement effective November 1 has been concluded between THE YALE & TOWNE MANUFACTURING COMPANY INC., of Willenhall and E. HOLDEN & CO. (BIRMINGHAM) LTD., of Birmingham and Oldham, to co-operate in the production of builders' hardware of all kinds for distribution through the sales organisation of The Yale & Towne Company.

It is announced that GYPROC PRODUCTS LTD. are combining with Cafferata & Co. Ltd. of Newark, The Gypsum Mines Ltd., Kingston-on-Soar and Mountfield, Robertsbridge, J. C. Staton & Co. Ltd., Burton-on-Trent, Stella Building Products Ltd., North Shields, and that the combined marketing organisation will be known as Gyproc Ltd.

OVERSEAS BUILDING

From Our Own Correspondents

AUSTRALIA (QUEENSLAND).—The State Government is negotiating for 250 acres of land at Wacol, to develop a new industrial area which would be based on similar successful schemes in Scotland and Northern Ireland. It is proposed that a Brisbane 'finance house' should build the factories in the area and then sell them to prospective buyers. Work on the development of the site will start as soon as possible.

AUSTRALIA (QUEENSLAND).—In the current financial year, educational works are to cost an estimated £3,685,000. New high schools are to be constructed at Inala (Brisbane), Cleveland, Brassall (Ipswich) and possibly Chinchilla. The programme also includes the erection of 13 new primary schools.

AUSTRALIA (QUEENSLAND).—The Rockhampton Harbour Board is to call tenders for new wharves at Port Alma for which government approval has recently been obtained. Anticipated cost is over £A525,000. . . . Provision is made in the State Budget, presented recently, for increased expenditure on roads, schools, home building and extensive development work including nearly £A4¾m. on the Townsville-Mt. Isa railway scheme and over £A1¼m. on new roads in the development of the Channel Country.

AUSTRALIA (SOUTH).—Detailed plans for the proposed £11m. Bolivar sewage treatment works have been released. The site will cover about 4 sq. miles, target completion date is 1968.

AUSTRALIA (SOUTH).—A new pulp and paper mill is proposed at Mount Gambia in the south-east costing £A13m., with an ultimate production of 100,000 tons of paper and paper board a year. Ratification of the Government's arrangements with Harmac Australia Ltd. (a new company) is progressing. Negotiations also involve Macmillan, Bloedel and Fall River Ltd. of Canada.

AUSTRALIA (WESTERN). — Preliminary plans have been approved by the Perth Diocesan Trustees of the Anglican Church for a multi-storey office project in Fremantle to be developed in four stages over a ½ acre site.

ECUADOR.—The Caja del Seguro and the Ministry of Defence plan to build two hospitals.

HOLLAND.—Pootaardappel en Zaaizaadverkoopbureau NV of Groningen is to construct a £600,000 potato processing plant in Groningen.

SOUTH AFRICA.—Two nine-storey office blocks are to be erected on a 71,000 sq. ft. site in Pretoria for £1,600,000. Sand Consolidated Investments and the African Life Assurance Society are to finance the work which is to start in January and be completed by July, 1963.

SOUTH WEST AFRICA.—Barclays Bank DCO reports that the Executive Committee of the South West Administration has announced new projects including a hospital for Ovambos at Okatana, a primary school at the Berg Aukas Mine (12 miles from Grootfontein), a drive-in theatre on the Khomas Hochland main road from Windhoek, and that the possibility of a cement factory is being investigated.

FBI Executive's Visit to E. Europe

MR. E. S. TAYLOR, who is the head of the East European section of the Overseas Directorate of the Federation of British Industries, left on October 18 to visit Bulgaria, Hungary and Rumania. Mr. Taylor, who will return on November 11, is studying export opportunities for British industry and in particular the possibilities of increasing exports of capital equipment to these countries.

S. African Building Plans Decrease

BARCLAYS BANK DCO reports a decrease of R26.2m. to R60.6m. in the value of building plans passed in the 18 principal urban areas of the country during the first eight months of this year (compared with the similar period in 1960). The Minister of Labour has forecast that during the next six months contracts to the value of R6m. will be put out to tender. The National Housing Commission has recently given out over 600 contracts.

Ten Storey Office Block for Lagos

A TEN STOREY office block valued at over £N350,000 was started in September on the Marina, Lagos, by Taylor Woodrow (Nigeria) Ltd., for West African Properties. Completion is due for March 1963. The reinforced concrete building will feature metal sun breakers on the exterior and will be air conditioned throughout. The architects are James Cubitt & Partners; the consulting engineers, Ove Arup & Partners; the quantity surveyors, W. J. F. Tillyard.

Wood Laminate Factory in India

AS A RESULT of collaboration between Permali of Gloucester and Chas. Lowe & Co. of Manchester with the Indian Plywood Manufacturing Co. and the Wallace Flour Mills Co. of Bombay, a £127,000 factory is to be built to manufacture a range of densified wood laminates. The operating company will be called Permali-Wallace Ltd. and will have its headquarters in Bhopal, 400 miles south of Delhi.

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SCOTTISH BUILDER

New Town Scheme

MIDLOTHIAN County Council, meeting in Edinburgh recently, agreed to co-operate in drawing up a development scheme for the new town which is to be centred on Livingston. Last month, West Lothian County Council agreed to co-operate with Midlothian and with the development corporation which is to be appointed for the new town. The area of the new town will extend into both counties.

A consultant is to be appointed by the three authorities. A special committee will be set up by Midlothian to discuss water, drainage, education, roads, and finance with a similar West Lothian Committee.

Building Sites Sought

A NEW COMPANY called Northern Industries, with headquarters in Aberdeen, are seeking sites in Aberdeenshire for private house building. Operations have already started at Fraserburgh where 33 semi-detached three- and four-apartment houses are under construction. Another scheme at Oldmeldrum, for which planning permission is awaited, is for more than 30 houses.

New Buildings

DUMBARTONSHIRE.—The CC are to erect 317 council houses and 137 lock-up garages at Heather-ave., Alexandria, Dumbartonshire, to cost £655,000. The county council are also building houses on six acres of the recently vacated Tullichewan Farm, Balloch, which they have bought for £3,500. The 92 Blackburn houses, built for the council at Cardross, Hardgate, Arrochar, and Roseneath have cost £152,689—£37,758 more than the total originally approved. At Balloch, 38 Orlit houses cost £65,630—£9,496 more than the approved sum.

DUNDEE.—F. & J. Reilly, of Fallin, Stirlingshire, have obtained a £76,500 contract from Dundee direct labour department to provide 9m. bricks.

EDINBURGH.—TC has awarded a £135,000 contract for the reconstruction of Peffermill-rd. and Niddrie Mains-rd. to George Wimpey & Co. Limited. Hot rolled asphalt will be used for the surfacing and the work is in charge of Mr. W. P. Haldane, City Engineer, Edinburgh.

GLASGOW.—Scottish Brewers Ltd. has been granted planning permission in principle for a new 40-bedroom five-storey hotel on the site of the Derby Hotel, Sauchiehall-st., Glasgow, with an underground car park and functions rooms on the ground floor. . . . Mr. Reo Stakis, a Glasgow restauranteur, has been given planning permission in principle for a new 36 bedroom and bathroom hotel, on two floors at Kilmarnock-rd./Tinto-rd., Glasgow, with car park space for 60 cars.

LANARKSHIRE.—Weir Housing Corporation Ltd., of Coatbridge, have secured a contract from Lanarkshire CC for the building of 124 timber houses on sites at Cleland, Newmains and Carluke.

LEVEN BURGH.—A total of 520 houses is to be built on the remainder of the Broom housing site at Leven in Fife. There will also be a school and shops. The Town Council are proposing to proceed with 298 of these, two-thirds to be 4-apartment and one-third 3-apartment.

THE BUILDER CONSTRUCTION NEWS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list, see previous issues. Those preceded by the symbol (A) are advertised in this number. The latest date for the receipt of tenders or applications appears above each paragraph. The symbol (R) preceding each entry indicates that applications must be received by this date.

BUILDING

OCTOBER 30

(AR) DRAYTON RDC.—Erection of eight bungalows, etc., at Woore. Clerk to C. Dep. £2 2s.

(AR) ORPINGTON UDC.—Firm price tenders for three public conveniences. E&S. Tenders by Nov. 30.

OCTOBER 31

(AR) BIRMINGHAM CITY C.—Erection of 80 dwellings at Rilstone-rd., Welsh House farm estate, Harborne. City A. Dep. £2 2s. Tenders by Dec. 1.

NOVEMBER 1

(AR) SOUTHAMPTON CBC.—(a) Erection of 31 houses at Summit-way, and (b) two blocks of five-storey flats (30 flats per block) at Townhill Park. Boro' E.

NOVEMBER 3

(AR) BEDFORD BC.—Erection of 24 flats at Brickhill-dr. Boro' E&S. Dep. £3 3s.

(A) CAMBRIDGE CITY C.—Fixed price tenders for the erection of 74 houses at Arbury-rd. estate (north). City S. Dep. £3 3s.

(AR) PETERBOROUGH JOINT ED. BD.—(a) Major extension to Walton sec. mod. sch.; (b) new county prim. sch. at Wittering. Chief Ed. Officer. Dep. £3 3s. and £2 2s., respectively.

NOVEMBER 4

(AR) ESSEX CC.—Firm price tenders for the erection of Health services clinic, Hockley. County A.

NOVEMBER 6

(AR) MITCHAM BC.—Erection of 245 dwellings, etc., at Phipps Bridge redevelopment scheme. Boro' E&S. Tenders by Dec. 14.

NORTHERN IRELAND HOUSING TRUST.—Construction of 21 old people's dwellings, with ancillary works, at Newry (Clanrye-ave. extension). Offices of Trust, 12 Hope-st., Belfast. Dep. £3.

NORTHERN IRELAND ELECTRICITY BD.—Erection of new showroom, offices, stores and garages at Windsor-ave., Lurgan. W. R. Wheelan, quantity surveyor, 38 Market-st., Lurgan, Co. Armagh. Dep. £5 5s.

(AR) PORTSMOUTH CITY C.—Erection of 78 flats and 47 garages at Clacton and Halstead roads. City A. Dep. £1.

(AR) SALFORD CITY C.—Development of land adjoining St. James's RC jun. sch., Ellor-st., Salford 6, as playground. W. & J. B. Ellis, architects, Barclays Bank bldgs., St. Helens. Dep. £2 2s. Tenders by Dec. 5.

NOVEMBER 7

(AR) CHELMSFORD BC.—Erection of 80 flats at Meadgate estate. TC.

(AR) NORTH-WEST METROPOLITAN REGIONAL HOSPITAL BD.—Erection of resident medical officers' and domestic hostels, at Welwyn/Hatfield New Hospital, Howlands, Welwyn Garden City, Herts. Regional A, 40 Eastbourne-terr., London, W2.

NOVEMBER 8

(AR) CHESHIRE CC.—Erection of College of Further Education, Macclesfield. County A. Dep. £2 2s. Tenders by Dec. 12.

(AR) SUTTON & CHEAM BC.—Erection of eight flats and 12 garages at Benhill Wood-rd., Sutton. Boro' E&S. Dep. £2 2s. Tenders by Dec. 13.

(AR) WANDSWORTH MBC.—Erection of 10 flats at Alston-rd. TC.

NOVEMBER 9

(A) HESTON & ISLEWORTH BC.—Erection of a brickbuilt shelter at Jersey-gdns., Hounslow. Boro' E&S.

NOVEMBER 10

(AR) BIRMINGHAM CITY C.—Erection of a police training college at Pershore-rd. City A.

(A) PORTSMOUTH CITY C.—Modernisation of flats at St. Faiths-rd., Landport. Director of Housing. Dep. £1.

NOVEMBER 11

(AR) PAIGNTON UDC.—Firm price tenders for 39 old people's flats and caretaker accommodation at junction of Brixham and Longstone-roads, Tweenaway Cross. Clerk to C. Dep. £2 2s.

NOVEMBER 15

(AR) CHESTER CITY C.—Erection of clinic and divisional health offices at Stalybridge. County A. Dep. £2 2s. Tenders by Dec. 13.

(A) RUISLIP-NORTHWOOD UDC.—Erection of 110 garages on various sites. E&S. Dep. £2 2s.

NOVEMBER 17

(A) REIGATE BC.—Fixed price tenders for the erection of 40 garages at Arbutus-rd.; 14 at Atherfield-rd. and 11 at Rutland-cl. Boro' E&S. Dep. £2 2s.

NOVEMBER 20

(A) CHINGFORD BC.—Single-storey extension to Larkswood social centre. Boro' E. Dep. £2 2s.

(A) ELY CITY C.—Construction of 33 garages at St. John's-rd. City E&S. Dep. £2 2s.

(A) MAIDSTONE BC.—Erection of 58 houses at Park Wood estate. Boro' E.

NOVEMBER 21

(A) ILFORD BC.—Firm price tenders for 79 garages at Padnall estate/Maypole estate/Oaks-la. estate (three contracts). Boro' E. Dep. £2 2s. (each contract).

NOVEMBER 27

(A) STOCKTON-ON-TEES BC.—Proposed Hardwick sec. mod. sch. for girls. Boro' A. Dep. £3 3s.

NOVEMBER 28

(A) ILFORD BC.—Extensions to sports pavilion at Hainault recreation ground, Ilford. Boro' E. Dep. £2 2s.

(A) SUNDERLAND CBC.—Erection of 176 dwellings. Boro' A. Dep. £2 2s.

NOVEMBER 29

(A) CHELMSFORD BC.—Fixed price tenders for the erection of 32 old people's flats at Meadgate estate. Boro' E. Dep. £2 2s.

DECEMBER 4

(A) HAVANT & WATERLOO UDC.—Erection of ten houses, etc., at Mill-rd., Waterlooville. E&S.

DECEMBER 5

(A) ROCHESTER CITY C.—Fixed price tenders for the erection of 67 houses and 12 flats at Earl estate. City S. Dep. £3 3s.

NO DATE

(A) LLANGEFNI UDC.—(a) Erection of 24 dwellings, etc.; (b) 26 dwellings, etc.; (c) abattoir, lairage, cold storage, offices, etc. Clerk to C. Dep. £5 5s. (a and b). Dep. £2 2s. (c).

(A) ROCHDALE.—Erection of All Saints CoE prim. sch. at Foxholes-rd. Design Partnership, architects, 58 Topping-st., Blackpool.

SERVICES, PAINTING, MATERIALS, ETC.

NOVEMBER 3

(AR) LEICESTERSHIRE CC.—Supply and erection of demountable timber classroom units for various sites. County A.

NOVEMBER 7

(AR) NORTHAMPTON CC.—Services for extension to Raunds sec. mod. sch. County A.

NO DATE

(A) BRISTOL.—Services for large housing contract at Knowle Stadium site for Whitchurch Park Development Co. Ltd., 7 St. James-sq., Bristol 2.

MUNICIPAL AND CIVIL ENGINEERING WORKS, ETC.

NOVEMBER 7

SOUTH CAMBRIDGESHIRE RDC.—Construction, testing and maintenance of a booster station, a 300,000-gallon post-tensioned circular concrete reservoir, and all other works incidental thereto. Lemon and Blizard, engrs., 59 Tufton-st., Westminster, SW1. Dep. £5 5s.

GENERAL BUILDING WORK (LONDON)

CHELSEA.—Planning Application.—BC has forwarded a town planning application to the LCC for the erection of an 11-storey block of flats at Elm Park House, Fulham-rd.

DEPTFORD.—Planning Application.—The LCC has received a town planning application from H. Owen Luder for the erection of shops and offices at Century cinema, New Cross-rd.

HAMMERSMITH.—Planning Application.—Gollins, Melvin, Ward & Ptnrs., have forwarded a town planning application to the LCC for the comprehensive redevelopment of 13 acres, including 7 tower blocks, hotel, flats, restaurants, offices, fire station, dance hall and PH, at Hammersmith Broadway.

HAMPSTEAD.—Planning Application.—Louis de Soissons has forwarded a town planning application to the LCC for the erection of 52 flats and garages at Adelaide-rd.

ISLINGTON.—Planning Applications.—The LCC has received the following town planning applications: New housing at Aberdeen Park (BC); new housing at Essex-rd. (BC).

LEWISHAM.—Planning Applications.—The following town planning applications have been received by the LCC: Erection of 16 dwellings and 17 garages at Salehurst-rd./Crofton Park-rd. (BC); erection of 53 dwellings and 17 garages at Shell-rd./Nuding-rd./Overcliff-rd. (BC).

PADDINGTON.—Planning Applications.—The LCC has received the following town planning applications: Erection of two 21-storey blocks of flats at Hall Park-rd./Adpar-st. area (BC); erection of a 12-storey block of flats and shops, filling station, garages, etc., at Queensway (City Parochial Foundation).

ST. MARYLEBONE.—Planning Applications.—The LCC has received the following town planning applications: Demolition and rebuilding as houses, flats and maisonettes with replica of main façades, at Clarence-terr. (Guy Morgan & Ptnrs.); shops and flats over at Park-rd. (Guy Morgan & Ptnrs.); erection of 30 flats at Penfold-st./Broadley-st. (BC).

SOUTHWARK.—Planning Applications.—

A petrol filling station, bowling alley, shops and restaurant on a site bounded by Southwark Bridge-rd./Ayres-st./Union-st. is proposed in a town planning application forwarded to the LCC by Bower & Warrell. . . . The MBC has received, for observation, a town planning application from R. Seifert & Ptnrs. for the erection of an office block at Long-la. / Gt. Dover-st. / Silvester-st. / Tabard-st. The Council has offered no major objection to the scheme.

STEPNEY.—Planning Application.—T. P. Bennett & Son has forwarded a town planning application to the LCC for the erection of a nurses' training school, residential home and nurses' gardens, at The London Hospital.

WANDSWORTH.—Planning Application. —The Norman Property Co. Ltd., of London, has forwarded a town planning application to the LCC for the erection of 20 three-bedroom flats, 12 three-bedroom houses and 17 garages at West Hill.

WESTMINSTER.—Planning Applications. —The following town planning applications have been forwarded to the LCC: Erection of offices at Grosvenor-pl. (Stone, Toms & Ptnrs.); erection of a multi-storey mechanical car park at Savile Row/Old Burlington-st. (Howard V. Lobb & Ptnrs.).

(PROVINCIAL)

AMESBURY (Wilts.).—RDC is to inform MH&LG that they intend to build 150 dwellings in 1962-3. In addition it is hoped to build 17 dwellings not yet allocated to specific parishes. . . . RDC is to open negotiations for purchase of 30 acres of land at Porton-rd., and to apply for planning permission.

AYLESBURY.—RDC propose erection of 54 dwellings and 33 garages at Haddenham.

BASINGSTOKE.—Lawrence Weaver Ltd. propose 85 'Chelsea' type houses, 12 'Manoco' type maisonettes and 40 garages at the Roundmead estate.

BATH.—Co-operative Society Ltd. proposes alterations and extensions to the Scala Cinema, Oldfield Park, to form new departmental store. Plans by own architects.

BEBINGTON.—BC propose erection of 4-storey maisonettes and 3-storey flats at New Ferry-rd./Marquis-st.

BEDFORD.—W. H. A. Robertson & Co. Ltd. proposes extensions at Ampthill-rd. works. Architects: Elliott Cox & Partners, London. . . . J. Sainsbury Ltd. propose erection of new shop premises at All Hallows-la. Architects: Gray, Birch & James, Norfolk-st., London, WC2.

BELFAST.—The Northern Ireland Housing Trust, 12 Hope st., Belfast, have won an appeal to construct houses on a site of 75 acres fronting on Dunmurry-la., opposite the golf course.

BELPER.—Fourteen old people's bungalows are to be erected at Cromford-rd., Crich, by the RDC.

BERWICK.—TC is to build another 42 houses on the West Field estate. During 1962, a further 50 houses will be built by the Council, chiefly for slum dwellers. Boro' E is J. A. Armitage.

BILLINGHAM-ON-TEES.—UDC to proceed with scheme for the erection of 43 houses. Surveyor is Edwin Shaw.

BLACKPOOL.—Fylde Hospital Management Committee are recommending major extensions to Victoria Hospital, Whinney Heys, over period of 10 years. Extensions will include outpatients' and casualty dept., nurses' home, maternity block post and ante natal clinics, and second operating theatre at a cost of £2m.

BOLDON (Co. Durham).—Plans have been prepared for the erection of three blocks of sleeping quarters at Whitburn rifle range for the Territorial and Auxiliary Forces Association of County Durham. Architects are Newrick and Blackbell, 58 John-st., Sunderland.

BOLTON.—Actan Ltd. propose erection of 449 dwelling units in 11-storey blocks, 120 bedroom hotel, supermarket, restaurant, 18 shops and maisonettes and offices on a site at Hesketh Mill, Blackburn-rd., £2m. est.

CHESTER.—TC propose erection of multi-storey flats at Newtown clearance area. . . . Chester & Dist. Hospital Management Committee have approved Moston Hall site for new area hospital.

CHESTERFIELD.—Following for RDC: Redevelopment of Apperknowle area, after clearance; erection of 300 bungalows, houses and flats at Drakehouse-la., Beighton.

CHESTERFIELD.—New Square Properties Ltd. propose erection of four-storey blocks offices and shops at New-sq.

CHESTER-LE-STREET.—Derek Crouch Ltd., public works contractors, Station-rd., Birtley, propose housing estate at Prebends Row, West Pelton.

CHICHESTER (Sussex).—City C plan the erection of 47 old people's flats and 27 garages at Spitalfield-la.

COLWYN BAY.—Henry Boot (Liverpool) Ltd., Aintree-rd., Bootle, propose erection of 338 dwellings, 5 shops and 2 miles of roadways on 71.4 acre site at Llanrwst-rd. and Pen y Bryne-rd., Upper Colwyn Bay, £1m. est. . . . BC propose erection of highways depot at Glan y Don estate. . . . Denbighs CC propose erection of sec. mod. sch. and mental health service hostel on 4 acre site at Glan y Don estate.

COOKHAM.—Plans submitted to RDC: Agricultural buildings, Stroud Farm, Holyport, for Mrs. Rinder; extensions to Queens Head Filling Station, Water Oakley, for E. C. Jones; assembly hall at Moor Hall, Cookham, for International Computers and Tabulators Ltd.; office building at Littlewick Green for the Southern Electricity Bd.; rebuilding works at Woodlands Park for W. R. Hammant Ltd.

COOKSTOWN (Co. Tyrone).—Representatives of Cookstown urban and rural councils have decided to recommend their respective authorities to provide an indoor heated swimming pool in Cookstown at a cost of not more than £75,000.

CROWTHORNE.—Mr. J. R. Knox proposes erection of 100 dwellings adjoining Heather Mount and Edgcumbe, New Wokingham-rd.

DEWSBURY.—The Church of Jesus Christ of Latter Day Saints propose erection of new Church at Halifax-rd.

DUNSTABLE.—RC Auth. propose erection of new RC church of St. Mary, £60,000 est.

EARBY.—Architect being engaged by UDC in connection with 1st phase of town centre redevelopment.

ESHER.—Mr. A. B. Lewis proposes demolition of buildings and erection of 6-storey office block at Torrie Lodge, Portsmouth-rd. Enquiry pending. . . . Hodgsons Kingston Brewery Ltd. propose demolition of the 'City Arms' public house at Esher High-st. and erection of warehouse, offices and showrooms.

HEBBURN (Co. Durham).—UDC expects to be in a position soon to proceed with the construction of a shopping centre in the Station-rd. and Tennant-st. area. Ministry approval is awaited. Architects for the scheme are Cackett, Burns Dick and MacKellar, 21 Ellison-pl., Newcastle-on-Tyne.

HOOK (Hants.).—NE Hants area planning committee has granted outline planning permission for the erection of 81 dwellings on land at Bell Meadows for Vicarl Properties Ltd.

HOPE.—Parish Council are to erect old people's dwellings in the parish.

HORSPATH (Oxon).—The British Motor Corporation plan to erect storage building with a floor area of 1m. sq. ft.

HUNGERFORD (Berks).—RDC has approved following: Light industrial premises at Station-rd., Hungerford, for Three Swans Hotel (Hungerford) Ltd.; light industrial development east of Railway Tavern for Oakes Bros.

KENT.—The LCC's rivers and drainage committee have approved a scheme costing £3,605,000 to relieve flooding of the Rivers Ravensbourne, Pool and Quaggy, and their tributaries. The programme of work will be undertaken in four main stages, the actual programming being dependent on consultations with the Kent County Council who will be carrying out major improvements in Kent, and the Ministry of Agriculture, Fisheries and Food. The work will include the extension, construction, reconstruction and enlargement of concrete channels and culverts, including the reconstruction of the Lee-rd. culvert on the Kid Brook and the Southend-la. culvert on the Ravensbourne, and the provision, where necessary, of relief culverts. Other works will include the piping-in of various minor tributaries which are at present in earth channels.

KINGSCLERE.—Lock Construction Co. Ltd. has submitted an application for planning permission to RDC in respect of the erection of 76 houses on land adjoining Elm Grove.

KINGSCLERE & WHITCHURCH (Hants.). —RDC recommended to build 50 houses in 1962.

LANCASTER.—RDC is seeking sites for erection of aged persons' dwellings at Bolton-le-Sands area.

LANCS.—The following primary school programme has been recommended by the divisional executive for 1964-65: CoE junior/infants' sch. at Hindley; new nursery sch. at Princess-st., Hindley; new Holy Family RC infant junior sch. at Platt Bridge.

LEATHERHEAD.—UDC propose erection of 108 dwellings at Lilliotts-la.

LEEDS.—TC propose erection of new abattoir off Pontefract-la. . . . L. Rakusen & Sons Ltd. propose factory extensions at Meanwood-rd.

LEEDS.—Following for TC: Erection of 48 four-storey maisonettes and 26 garages at Belle Isle; new central baths at Westgate; new maternity and child welfare and school clinics at Seacroft, £28,300 est. . . . Church of Jesus Christ of Latter Day Saints propose erection of new church at Vesper-rd. . . . Ind Coope (North East) Ltd. propose rebuilding 'Red Bear' inn, Skinner-la. . . . Esso Petroleum Co. Ltd. propose erection of petrol service station, showrooms and offices at Roundhay-rd. . . . Wm. Sugden (Leeds) Ltd. propose erection of steel warehouse at Holbeck.

Contracts Placed

We are glad to receive from architects and quantity surveyors for publication details of contracts placed to the value of £20,000 or over. Such information should reach the Editor as soon as possible after the contract is signed. Names of the architect and other consultants associated should be given.

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LONDONDERRY.—Housing Ministry have approved the re-development scheme for the Rossville-st./Lecky-rd. area for the Housing Trust.

LONGBENTON (Northumberland).—UDC are to erect 24 houses at Laurel-ave., Palmersville. No tenders have yet been invited. Council's Surveyor is A. E. Sweetman, Council Offices, Forest Hall, Newcastle-on-Tyne.

LUTON.—Flowers Breweries Ltd. propose erection of licensed premises at the junction of Braminghamrd. and Watermead-rd. . . . Walters Central Newsagency Ltd. propose erection of newspaper depot with flats over at John-st. . . . Country and New Town Properties Ltd. propose retail store and offices at Waller-st., Cheapside, and Silver-st.

MACCLESFIELD.—CE Auth. propose erection of new prim. sch. on a 5-acre site at Ivy-rd.

MACCLESFIELD.—R. J. & J. Willan Ltd., Sale, Ches., propose erection of 27 flats/garages, Manchester-rd. . . . George Wimpey & Co. Ltd. propose erection of 39 houses at Marlborough-drive, Tytherington. . . . J. Foulkes seeks planning approval for erection of 45 houses off Higher Fence-rd.

MANCHESTER. — F. Entwistle & Co. (Builders) Ltd., Cheadle Hulme, Ches., propose erection of two 9-storey blocks of flats and 108 garages at Pink Bank-la., Longsight. . . . Barclays Bank Ltd. propose reconstruction of bank premises at Ardwick Green South/Kale-st., Ardwick. . . . Glazier Properties Ltd. propose erection of two warehouses at Broughton-st., Cheetham/Mary-st., Strangeways.

NANTWICH.—County planning authority is being asked by UDC to reserve land at Brines baths site Middlewich-rd., Kingsley Fields, for housing purposes.

NEWBURY.—BC is seeking approval from MH&LG for 1962 programme of 114 houses and 24 flats with 3 shops and flats on Turnpike-rd. estate and possible addition of block of old people's dwellings on Fair-close. . . . Governors of St. Bartholomew's grammar school propose to build full-size indoor swimming pool with indoor heating plant and adequate changing accommodation, est. £20,000.

NOTTINGHAM.—Church of Jesus Christ of Latter Day Saints propose erection of new church at Stanholme-sq.

ODIHAM (Hants).—Alterations and improvements planned for the Magistrates' Court.

ORRELL.—J. B. Almond proposes extensions to 'The Running Horses' Hotel. . . . 3½ acres of land has been reserved on the town map for erection of RC sch.

OXFORD.—Regional Hospital Bd. propose occupational therapy unit at Fairmile Hospital, Wallingford, £37,877 est.; new central stores, £35,121 est.; alterations to laundry at Watermoor Hospital, Cirencester, £10,150 est.; extensions to children's unit at Park Hospital, Oxford, £36,300 est.; conversion of Fircroft, Banbury, to form group offices, £7,960 est.; conversion of premises at Westways Hospital, Banbury, for medical staff accommodation, £6,836 est.; additional gynæcology beds at Horton General Hospital, £8,550 est.; extensions to audiology research unit at the Royal Berkshire Hospital, £9,857 est.

POYNTON.—Following for Ches. CC: New county sec. sch. at Yew Tree Farm site; new CP sch. on a 3-acre site at Hazelbadge-rd.

ROMSEY & STOCKBRIDGE (Hants.).—RDC has approved recommendation that the architects in consultation with the Surveyor and Area Planning Officer prepare a revised lay-out for North Baddesley, allowing for the provision of sites for community buildings.

ROTHERHAM.—BC propose extensions to sec. sch. at Spurley Hey.

SALE (Ches.).—The Beaumont property Trust Ltd., London, propose erection of hotel, shops, 16-storey block flats and 3 elevated car parks with 240 spaces at Springfield-rd. area. . . . Following for BC: 6 shops at Oaklea Farm estate, Ashton-on-Mersey, 4 shops at Norris-rd, 3 shops at Northenden-rd., Sale Moor.

SCARBOROUGH.—During the next five years the TC intends commencing work on the following schemes:—Extensions to the Town Hall £204,000; development of Scalby Mills area £63,000; indoor swimming baths £180,000; extensions to North Bay Promenade £155,000; public abattoir and cold store £72,000; and development of Aquarium Top site £252,000. . . . Boro' E (V. Forshaw) has prepared a layout plan for 51 old people's dwellings and wardens houses with communal facilities on the Sandybed estate. Sites are also to be considered for the erection of further one-bedroomed flats. . . . The TC has approved plans and estimates amounting to £70,000 for laying 10 to 12-inch water mains between Randymere Reservoir and Sneaton Castle Reservoir.

SEDGLEY.—K. E. Millard & Co. Ltd. propose erection of 28 houses and 6 maisonettes at Sandyfields estate. . . . David Hill (Builders) Ltd. propose erection of 10 detached dwellings at Cotwallend-rd., Lower Gornall. . . . Alan Young proposes erection of 32 flats and 30 garages at Garden Walk estate. . . . S. O. Heywood proposes erection of 12 dwellings at The Uplands, Wolverhampton-rd.

SHEFFIELD.—G. Handley Ltd. propose erection of eight-storey block of 56 flats, three-storey block of 12 flats, house, bungalow and garages at Endcliffe Hall-ave. . . . Following for TC: Point block of flats at Middlewood-rd.; 44 old people's dwellings at Harborough-ave., Manor Park estate.

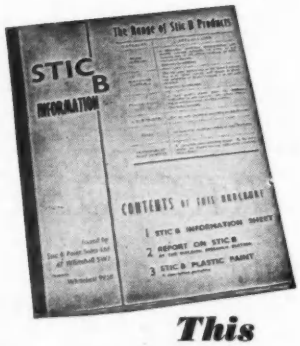
SHEFFIELD.—Stanley Works (GB) Ltd. propose erection of administration block at Rutland-rd.

SHEVINGTON.—Methodist Church Authorities propose erection of new Church building at Gathurst-rd.

SHIPLEY.—Factory development on a 17-acre site at Dockfield industrial estate is proposed by the Metal Box Co. Ltd., London.

SHOTLEY BRIDGE (Co. Durham).—Sketch plans have been prepared for casualty, outpatients' and x-ray depts. at Shotley Bridge General Hospital, for Newcastle Hospital Bd. Consulting engineers for the work are R. W. Gregory & Partners, Pilgrim House, Pilgrim-st., Newcastle-on-Tyne.

SILSDEN.—UDC and Gregory Housing Ltd. are discussing a modified scheme for improvements to Town Hall.



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SKIPTON.—RDC has approved layout for residential developments at Dalacres (No. 2) site, Embsay. . . . West Riding CC propose erection of child welfare clinic at High-st.

SOMERFORD (Hants.).—Work will start on receipt of MoE permission on the erection for Bournemouth RC Development Society on a site near Christchurch by-pass on Somerford estate of a new RC school, est. £35,000, to replace existing St. Joseph's school, Purewell.

SOUTHAMPTON.—BC is to build 31 houses at Summit Way and two blocks of 5-storey flats (30 flats per block) at Townhill Park.

SOUTH CRAVEN.—West Riding EC propose extensions to sec. sch. during 1964-65.

SOUTH SHIELDS.—During 1962, the Corporation are to obtain tenders for the erection of 217 houses at Whiteleas, 62 at Brunswick, and 120 on the Simonside Estate.

STOCKTON-ON-TEES.—R. W. Bell and Co. (Builders) Ltd., Mistletoe Road, Jesmond, Newcastle-on-Tyne, are to erect 40 terrace houses and 22 garages at Darlington-la., Stockton. Plans have been approved.

STOCKTON-ON-TEES.—T. H. Turnbull, Scarborough-st., West Hartlepool, prepared plans for houses at Hart Village for J. Barker & Son. . . . TC, which placed a contract recently for 57 houses on the Victoria site, is to arrange contract for a similar number of houses on the same estate. Boro' A is T. C. Hartley, 28 The Square, Stockton-on-Tees.

STOKE-ON-TRENT.—Following for TC: 1,000 dwellings during 1962; number of statutory youth clubs to be increased to 40 during 1962.

STRETFORD.—Following for BC: Two 3-storey blocks of flats and 7 garages at Stretford-rd.; three-storey point block of flats at Nansen-close; 95 dwellings and 7 old people's flats during 1961; 159 dwellings and 66 old people's flats during 1962. . . . Major building projects during 1965/66 to include:—completion of boys' sec. school, Great Stone-rd.; St. Ann's RC infants' school, New-st.; Matthew's CoE, school; mixed sec. school, Lostock. . . . ICI Ltd. propose erection of store and dyestuffs building at Trafford Park Works. . . . The Springfield Warehousing & Wharfage Co. Ltd. propose erection of 2 storage buildings at Trafford Park-rd. . . . Massey Ferguson (United Kingdom) Ltd. propose erection of new warehouse and warehouse extensions at Barton Dock-rd. . . . Schenk Motor Engineering Co. Ltd. propose erection of petrol service station and car showroom, with flat over, at 465/473 Stretford-rd.

SUNDERLAND.—The planning authorities have approved outline plans for the erection of three-storey offices and shops near Sunderland Central Railway Station for Metrovincial Properties Ltd. Architect is J. G. L. Paulson, 54 Albert Road, Middlesbrough.

SUNDERLAND.—The Corporation's transport committee has decided on an alternative site in Thomas-st. north for the erection of a bus depot. . . . TC has approved in principle the third stage of the reconstruction and widening scheme for North Hylton-rd. Cost will be £100,300.

SUTTON & CHEAM.—Plans submitted to BC: 3-storey block of 7 flats with maisonettes over at Christchurch Park for M. J. Gleeson (Contractors) Ltd., London-rd., North Cheam; 27 flats and garages at Grange-rd., Sutton for the Chalford Property Co. Ltd.; 24 flats and garages at 216 Sutton Common for Woodgavil Properties Ltd.; extensions to garage premises at High-st., for Phoenix Motor Co. (Surrey) Ltd.

TYNEMOUTH.—Plans have been approved for extending the Marden Farm estate for John T. Bell & Sons, builders, Market Street-chbrs., Newcastle-on-Tyne.

UP HOLLAND.—Trustees of Up Holland Methodist Church propose erection of new church/Sunday sch. at junction of Revington-dr./Alma Hill.

WAKEFIELD.—Buxted Chicken Co. Ltd. propose erection of offices and depot at Flanshaw-la. . . . Brunswick Bowling Ltd. propose erection of 20-lane bowling centre at Denby-rd. . . . Thrift Stores Ltd. propose erection of supermarket at Westmorland-st.

WALTON & WEYBRIDGE.—Day & Son

(Builders) Ltd. propose residential development at Homefield-rd. and Field Common-la.

WOOBURN.—PC to appoint architect to prepare plans for a new sports pavilion and community centre at Wooburn Park.

WORKINGTON.—A new casualty dept. is to be built at Workington Infirmary by Newcastle-on-Tyne Regional Hospital Board. Plans are by N. Edgar, 72 Warwick-rd., Carlisle (the Board's Divisional Architect). R. W. Gregory & Partners, Pilgrim-st., Newcastle-on-Tyne, have been appointed consulting engineers for the work.

YORK.—EC propose erection of new sec. mod. sch. at Knavesmire. . . . Church of Jesus Christ of Latter Day Saints propose erection of new church at Acomb-rd.

TENDERS

(A) Denotes *accepted*.
(PA) Denotes *provisionally accepted*.
(RA) Denotes *recommended for acceptance*.
(AM) Denotes *accepted subject to modification*.
(GD) Denotes *accepted subject to approval by appropriate Government Department*.

BASILDON.—New building for HM Stationery Office for MoW. Architect: H. E. Furse. (A) R. Costain (Construction) Ltd., £400,000.

BATTERSEA.—Erection of superstructure, etc., to provide 73 dwellings for stage 2 of the Knox-rd. scheme for BC. (A) Direct labour, £203,416.

BEDLINGTON.—Erection of 32 housing units in three-storey construction at Choppington for UDC. (A) Direct labour.

BERMONDSEY.—Erection of 54 dwellings and garages etc. at Bush-rd. for MBC. (A) Direct labour, £172,818.

BLYTH.—Erection of 22 houses at Kitty Brewster-rd. for TC. (A) A. R. Robertson (Builders) Ltd., East Park View, Blyth.

BUSHEY (Watford, Herts.).—Erection of Rosary Priory sec. sch. Architects: Wallace J. Gregory, FRIBA, FRICS, MInst. Struct.E., chartered architect, surveyor and structural engineer, of 19/20 Grays Inn Chambers, Grays Inn, WC1. QS: Lane & Jewell. (A) Charles Brightman & Son Ltd., Watford, Herts., £75,740 (negotiated tender). This enlarges on information given in our issue of Oct. 6.

CARLISLE.—Erection of junior school at Morton for City Council. Architects: Johnston and Wright, 13 Castle-st., Carlisle. QS.: J. T. Hart, Natproban-chbrs., Victoria Viaduct, Carlisle. (A) Border Engineering Contractors Ltd., Queen-st., Whitehaven, £62,000 (approx.). Extensions to College of Art for EC. (A) F. Parkinson & Son Ltd., Blackpool.

CHESTERFIELD.—Erection of 546 dwellings at Loundesley Green estate for BC. (A) M. J. Gleeson (Contractors) Ltd.

DEPTFORD.—Following for MBC: Erection of 24 flats on two sites at Blockhouse-st. (A) A. A. Stuart & Sons (Contractors) Ltd., £60,026 (fixed price tender). Erection of 48 flats at Selden-rd., Hathway-st. and Senate-st. (GD) A. A. Stuart & Sons (Contractors) Ltd., £139,828 (fixed price tender).

DUNGENESS.—Provision of a 275 Kv switch house for Dungeness nuclear power station for the CEGB. (A) Sir Robert McAlpine & Sons, £600,000.

EDINBURGH.—Reconstruction of Peffermill-rd./Niddrie Mains-rd., for City C. (A) G. Wimpey & Co. Ltd., £135,000.

ERITH (Kent).—New motor-vehicle repair and service shop for British Insulated Callenders Construction Co. Ltd. (a member of the BICC group). (A) Sir Robert McAlpine & Sons, £50,000.

FAILSWORTH.—Fixed price tenders for the erection of the Robert Sidlow public library for UDC. E&S is E. D. Turner. (A) E. B. Jones & Rawlinson Ltd., 6 Leaf-sq., Salford 6, £24,546.

FINSBURY.—Erection of six blocks of flats comprising 472 dwellings, 15 two-storey shops, a PH and garages, at King-sq. for MBC. Architects: Emberton, Franck & Tardrew. QS.: Gardiner & Theobald. (A) Y. J. Lovell (London) Ltd., £1¾m. (approx.).

GT. YARMOUTH.—Repair of south pier at harbour for Gt. Yarmouth Port and Haven Commissioners. (A) Sir Lindsay Parkinson & Co. Ltd., £343,234.

ISLINGTON.—Four-storey block of 22 dwellings at 344-346 Camden-rd. for MBC.

	Full 'rise and fall' basis	Fixed price basis
Walter Lilly & Co. Ltd.	£57,742	£59,057
W. J. Simms, Sons & Cooke Ltd.	56,641	58,056
Allen Fairhead & Son Ltd.	56,401	57,901
Patman & Fotheringham Ltd.	56,298	57,598
Pitchers Ltd.	55,021	56,886
(GD) Rowley Bros. Ltd.	£55,197	£56,297

(Fixed price figure accepted)

JARROW.—First stage of quay improvement scheme at Ocean terminal for Shell Mex and BP. (A) Sir Robert McAlpine & Sons, £250,000.

LEEDS.—New branch of College of Engineering & Science for TC. (A) M. Harrison & Co. (Leeds) Ltd. Extension to Brown-la. works for W. A. Smith (Leeds) Ltd. (A) Direct labour. New showroom and shops at Commercial-st. for Great Universal Stores. (A) William Irwin Ltd.

LEWISHAM.—Erection of 224 flats, 28 maisonettes, 4 houses, 56 garages, a highways maintenance depot and a housing maintenance depot, being the second stage of the Porthcawe-road housing scheme for MBC. QS: Oswald E. Parratt & Ptnrs.

W. J. Simms, Sons & Cooke Ltd.	£928,228
Rowley Bros. Ltd.	923,081
Leslie & Co. Ltd.	917.073
Wilson Lovatt & Sons Ltd.... ...	915,263
Kirk & Kirk Ltd.	905,322
Alan Fairhead & Sons Ltd.... ...	900,112
Y. J. Lovell (London) Ltd... ...	888,622
M. J. Gleeson (Contractors) Ltd....	888.613
Wm. Willett (Contractors) Ltd. ...	883,273
Rush & Tompkins Ltd.	870,244
Wates Ltd.	867,641
(A) Griggs & Son Ltd.	858,518

LIVERPOOL.—Erection of 12 dwellings at Byles-st. for TC. (A) R. G. Barton & Sons Ltd., Formby, £31,231.

(GD) LONDON (Air Ministry).—Contracts to the value of £4,000 or over for week ended October 20: *Building work:* Abingdon, Berks.; E. & J. Cotton Ltd., Iver, Bucks. Uxbridge, Middx.; W. H. Streeter Ltd., Hampton, Middx. Honington, Suffolk; Walter Lawrence & Son Ltd., Swaffham, Norfolk. Mormond Hill, Aberdeenshire; Alexander Hall & Son (Builders) Ltd., Aberdeen. *Surfacing work to existing paved areas:* Aldergrove, Northern Ireland; The Limmer and Trinidad Lake Asphalt Co. Ltd., Belfast. *Artificers' work* (3 *contracts*): Yatesbury (Wilts.), etc., Filton (Bristol), etc., Andover Hants.), etc.; Dudley Coles Ltd., Plymouth, Devon. *Painting work:* Finningley, etc., Yorkshire; Joseph V. Dowling, Rotherham, Yorks. Shinfield Park (Berks.), etc.; Fields (Reading) Ltd., Reading, Berks. *Preparation and maintenance of land:* St. Mawgan, Cornwall, Chivenor, Devon, etc.; Land Products Ltd., Wimborne, Dorset. Mount Batten, Devon, etc.; E. Widdicombe, Yealmpton, Devon.

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(GD) LONDON (MoW).—Contracts placed for week ended October 14: *Bedfordshire:* Erection of Home Office store at Podington; Maurice Hill Ltd., Blendworth-hse., Horndean, Hampshire. *Berkshire:* Supply, deliver and erect high level storage tank at Broadmoor Hospital, Crowthorne; Braithwaite & Co. (Structural) Ltd., Post Office Box 2, Gt. Bookham, Surrey. *Buckinghamshire:* Installation of oil-fired boiler at Joint Services Staff College, Latimer House, Chesham; Southern Heating Ltd., Cox Green, Maidenhead, Berkshire. *London:* Repairs to brick and stonework at Bethnal Green Museum, E.; Mr. W. J. Southgate, 65 Kenway-rd., Earls Court, London, SW5. External treatment and decoration at National Maritime Museum Greenwich, SE; Sykes & Son Ltd., 8 Essex-st., Strand, WC2. *Middlesex:* Installation of water pumping set at Ship Hydrodynamics laboratory, Feltham; The English Electric Co. Ltd., Dunnings Bridge-rd., Netherton, Bootle 10, Lancashire. *Staffordshire:* Erection of telephone exchange at Post Office, Turls-st., Sedgeley; A. J. Crump & Sons Ltd., Aston-rd., Dudley, Worcestershire. *Warwickshire:* Erection of telephone exchange at Post Office, Lichfield-rd., Four Oaks; J. Miller & Partners (Hayes) Ltd., Pump-la., Hayes, Middlesex. *Yorkshire:* Internal painting at War Department depot, Harrogate-rd., Yeadon; R. Ainsworth Ltd., 273 Otley-rd., Leeds 10. Erection of telephone exchange at Kingston-upon-Hull; Stepney Contrs. Ltd., Grovehill, Beverley, Yorkshire.

LUTON.—Erection of 259 'Easiform' dwellings and 74 two-storey aged persons' dwellings at Pewsey estate for BC. (A) John Laing & Son Ltd., London, £677,085. Construction of multi-storey car park at Regent-st. for BC. (A) Holland & Hannen and Cubitts Ltd., London.

MANCHESTER.—New office and factory at Medlock-st. for Gland Supplies Ltd. (A) P. Hamer Ltd., Swinton, Lancs.

NEWCASTLE-ON-TYNE.—(a) Erection of boilerhouse, and (b) installation of boiler and calorifier plant at Newcastle General Hospital for Newcastle Hospital Bd. Architects: Cackett, Burns Dick and McKellar, 21 Ellison-pl., Newcastle. (A) Purdie Lumsden and Co., Oxford-st., Newcastle, £30,131, and Selborne Engineering Co. Ltd., Jesmond, Newcastle, £94,902, respectively.

NOTTINGHAM.—Factory development at Wigman-rd. for Tom Browne (Nottingham) Ltd. (A) John Laing & Son Ltd., London. New shops, maisonettes over and supermarket at Alfreton-rd. for Dido Property Developments Ltd., Gloucester. (A) A. Mason (Contractors) Ltd., Mansfield.

OXFORD.—Erection of 21 houses at Cornwallis-rd. site for TC. (A) A. C. Carter (Oxford) Ltd., Green-rd., Headington, £55,273. Following for Regional Hospital Bd.: Extensions at Dellwood Maternity Hospital. (A) McCarthy E. Fitt Ltd., Reading, £64,297. Building work in conection with new boiler house at Kettering Hospital. (A) Mitchell Construction Co. Ltd., Peterborough.

POPLAR.—Erection of 42 dwellings at Newby-pl. for BC. Architect: H. Moncrieff, Co-operative Planning Ltd. QS: T. K. Barrett & Son. (A) Griggs & Son, £88,600.

RYTON (Co. Durham).—Erection of four single persons' flats and three aged persons' bungalows at Crawcrook, and a block of four single persons' flats and four old people's bungalows at Ryton for UDC. (A) Direct labour.

SALFORD.—Erection of two 12-storey blocks of flats and four 5-storey blocks of flats and 31 garages at Flax-st. for TC. (A) G. Wimpey & Co. Ltd., London.

SHEFFIELD.—Erection of 82 dwellings, stores, garages and 4 shops at Netherthorpe for TC. (A) Bailey Martyn (Holdings) Ltd.

SHEPPERTON (Middx).—Two sound stages and ancillary works at Squires Bridge-rd. for Shepperton Studios Ltd. Architects: Oscar Garry & Ptnrs., London, W1. QS: Stanley Griffiths & Ptnrs. (A) Howard Farrow Ltd., Golders Green-rd., London, NW11, £40,000.

SOUTHWARK.—Alterations and additions to form laboratories for Dept. of Medicine, Guy's Hospital, for Board of Governors. Architects: Young & Hall. QS: E. G. Lynde & Ptnrs. (A) Y. J. Lovell (London) Ltd., £31,785.

STOCKTON-ON-TEES.—Erection of RC sch. of the English Martyrs. (A) Smith and Twentyman Ltd., 32 Bridge-rd., Stockton-on-Tees, £54,141. Erection of 57 houses at Victoria housing site for TC. (A) Moore and Cartwright Ltd., High-st., Norton-on-Tees, £96,324.

STOKE-ON-TRENT.—Erection of 40 dwellings at Sant-st., Burslem, and 40 dwellings at Port Vale-st. for TC. (A) Seddon (Stoke) Ltd., £66,682 and £78,374.

SUNDERLAND.—Erection of 48 houses at Pennywell housing site for TC. (A) James Prentice Ltd., Leeds-st., Sunderland, £71,423.

SUNNINGDALE (BERKS).—Extensions to Charters sec. mod. sch. for CC. Architect: J. T. Castle. (A) J. M. Jones & Sons Ltd., Maidenhead, £40,000.

SURREY.—Following for CC: Extensions and adaptation at Sheerwater CS sch., Woking. (A) R. Holford & Co. Ltd., Guildford, £247,390. Adaptations and extensions at Banstead CS sch. (A) Whyatt (Builders) Ltd., 225 Streatham High-rd., London, SW16. Erection of Bell Lane CP sch., Fetcham. (A) Uden & Co. (Epsom) Ltd., 53 South-st., Epsom, £72,145. Erection of Yattendon CP sch., Horley. (A) Bishop and Clarke Ltd., Horley, £71,931.

SWINDON.—Erection of 72 houses and 57 garages at Park South neighbourhood for BC. (A) Building and Public Works Construction Co. Ltd., Swindon, £151,391.

TODMORDEN.—Erection of 3 blocks of maisonettes and flats (total 33 units), for BC. (A) G. Wimpey & Co. Ltd., £75,914.

WALTON-LE-DALE.—New sewage disposal works for UDC. Const. engr.: C. J. Lomas & Son, Manchester. (A) R. T. Haxley & Co. Ltd., Cleckheaton, £317,700.

WINCHESTER.—Erection of 156 flats in 4 blocks at Winnall Manor estate for TC. (A) Wates Ltd., London, £395,848. Erection of shops, offices and maisonettes at St. Georges-st. and Upper Brook-st. for TC. (A) Hampshire Contractors Ltd., Winnall Close, Winnall, £115,724.

WOKINGHAM.—Erection of 98 dwellings at Norreys Barn estate for BC. (A) Telling & Son, Sunbury-on-Thames, £197,848.

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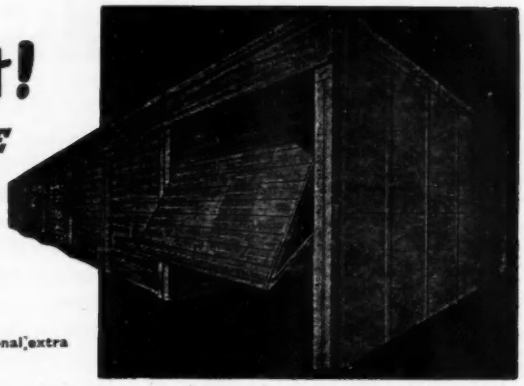

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